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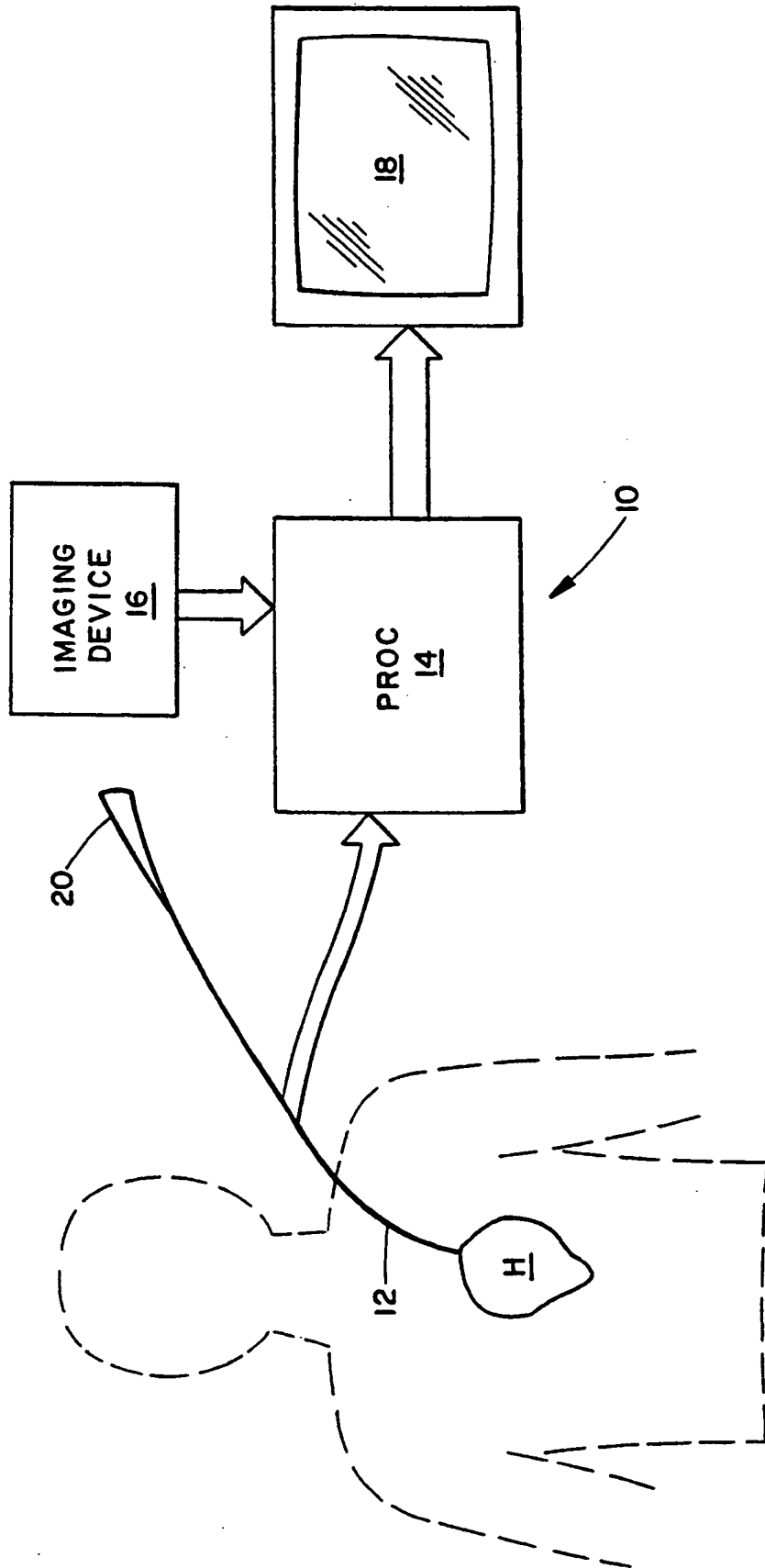


FIG. 1(a)

FIG. 1(b)

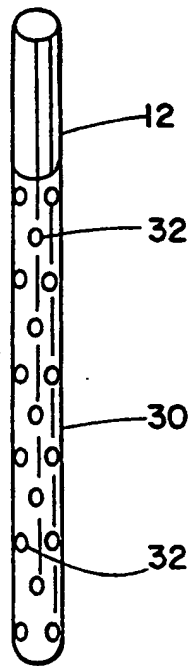
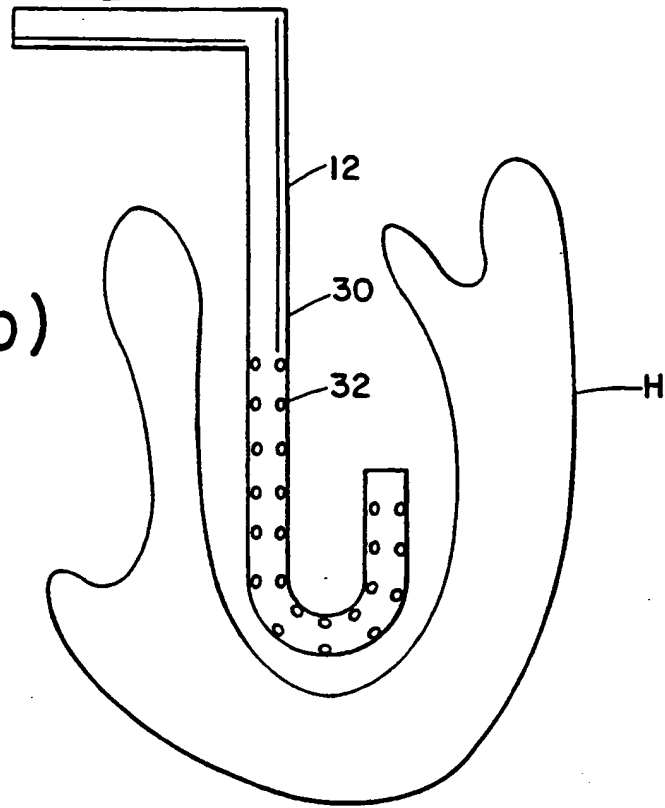


FIG. 2

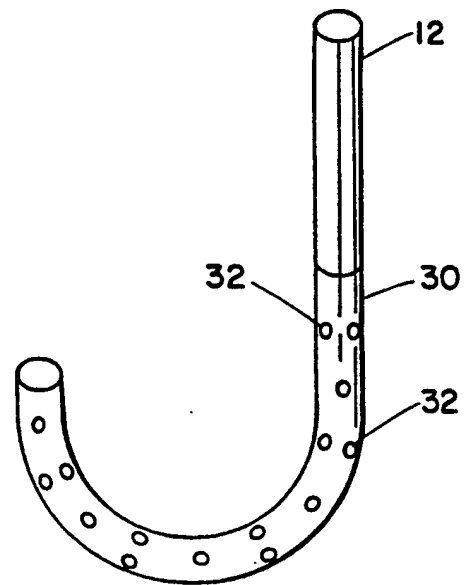


FIG. 3

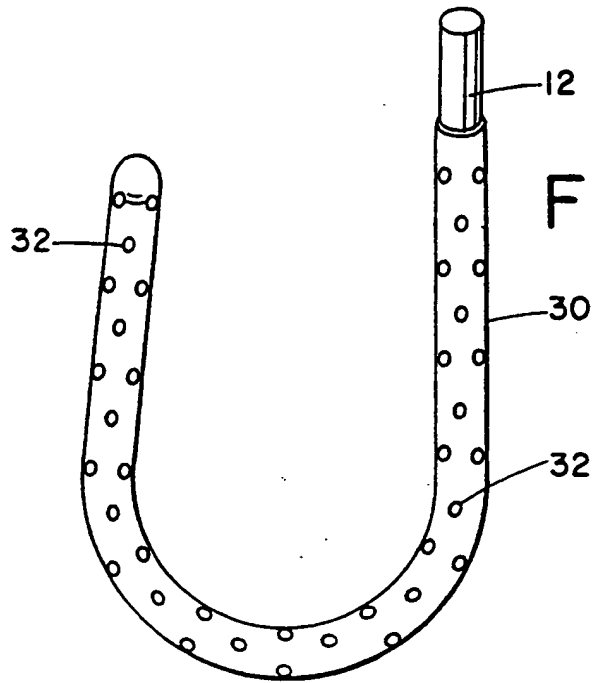


FIG. 4(a)

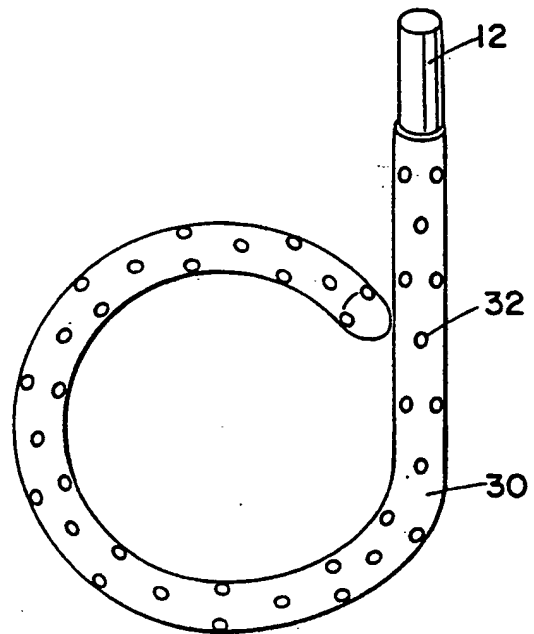


FIG. 4(b)

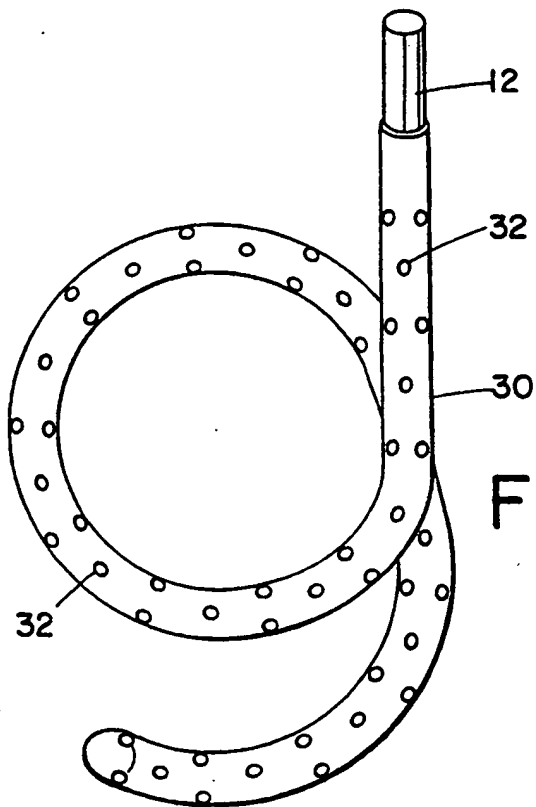


FIG. 4(c)

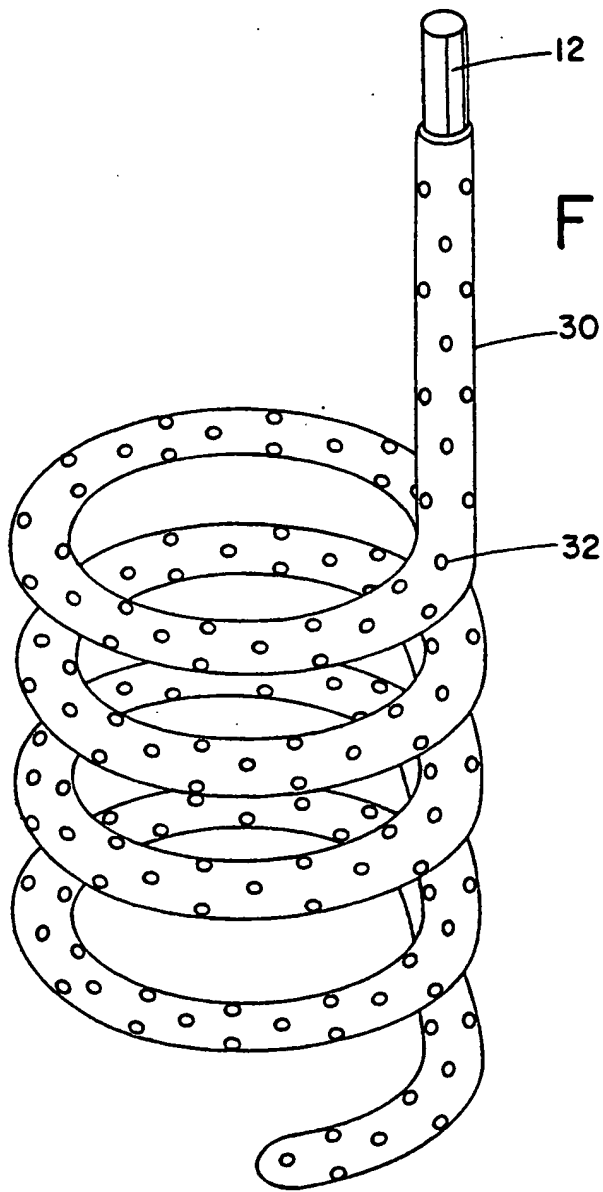
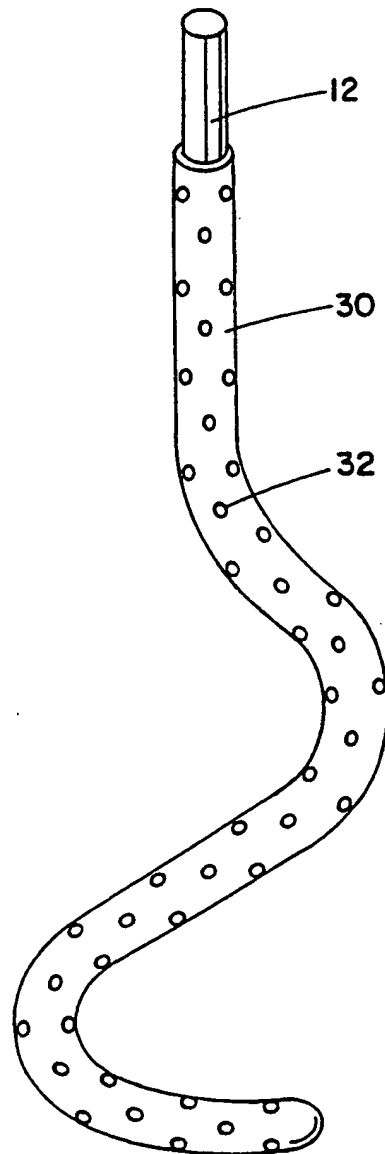
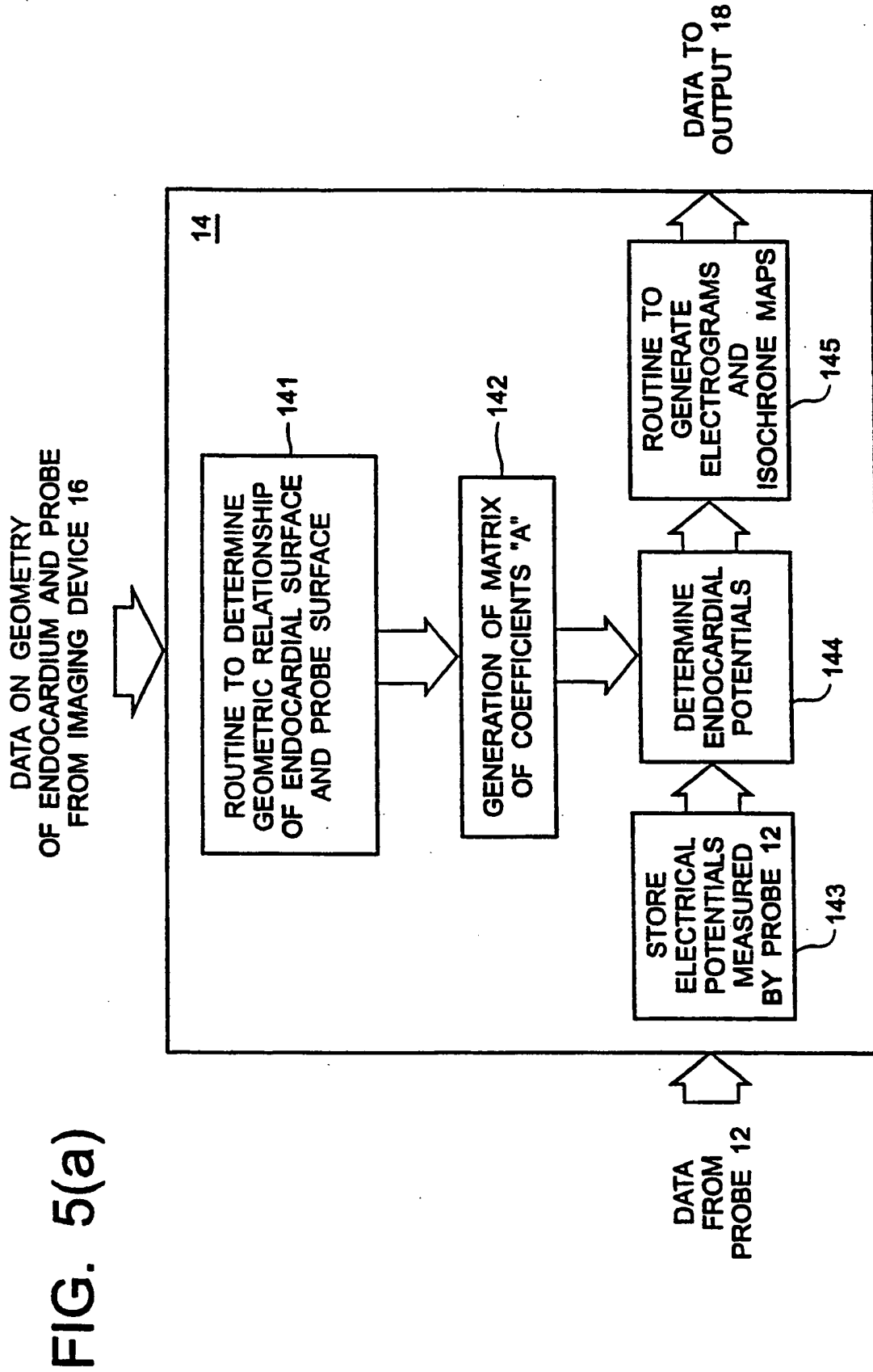


FIG. 4(e)





CARDIAC ELECTROPHYSIOLOGY IMAGING TOOL (C.E.I.T.)

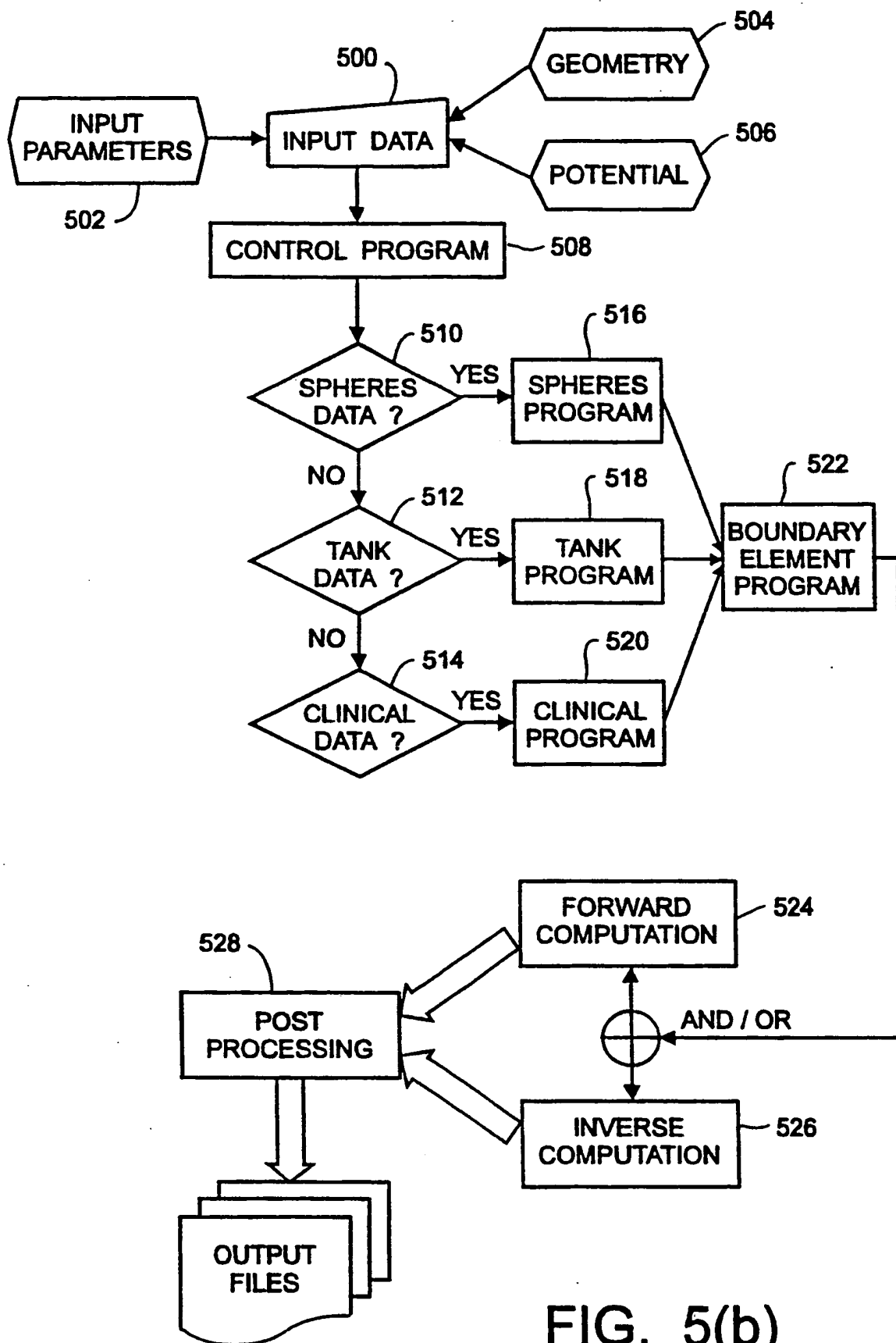


FIG. 5(b)

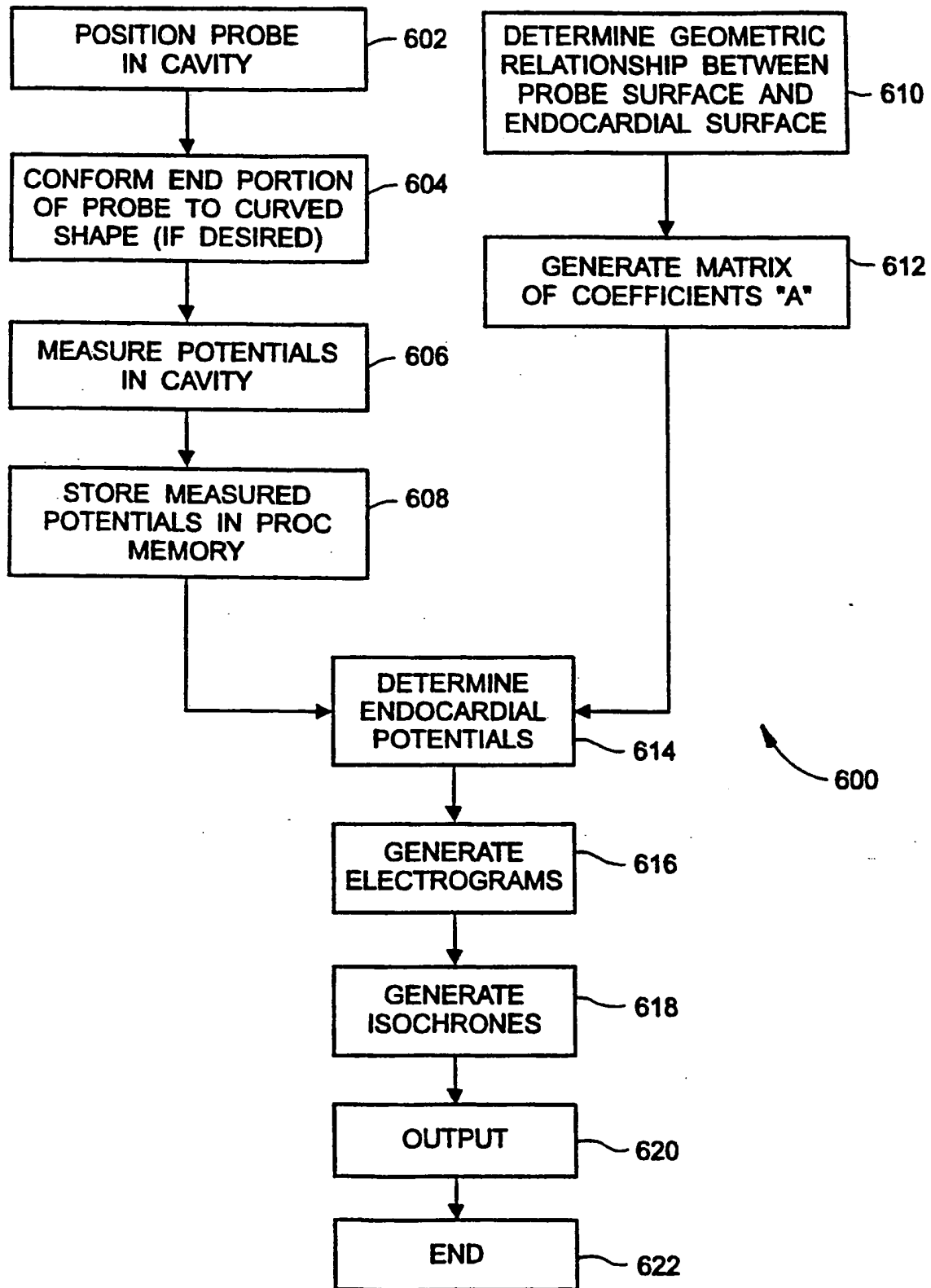


FIG. 6

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FIG. 7

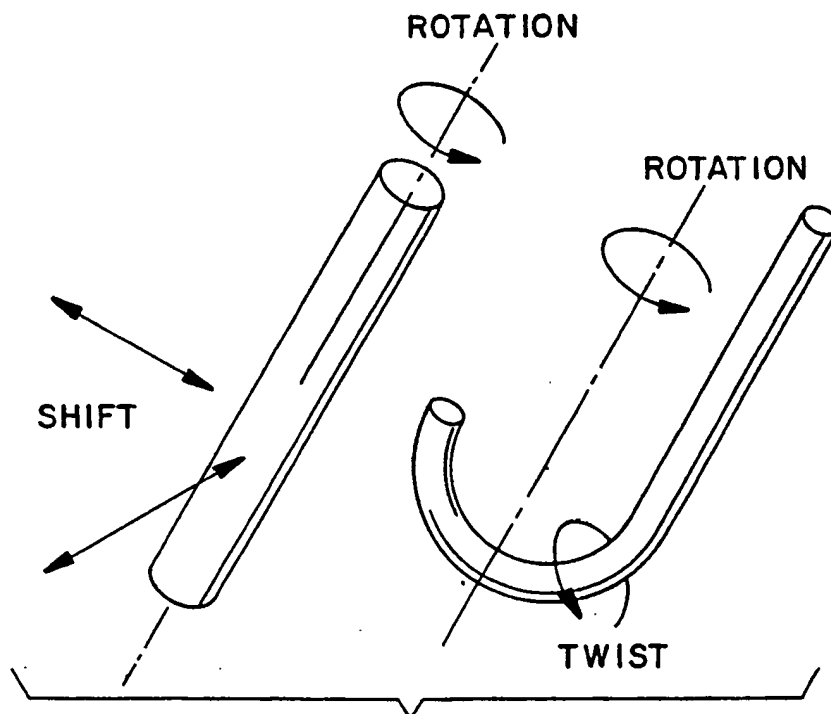
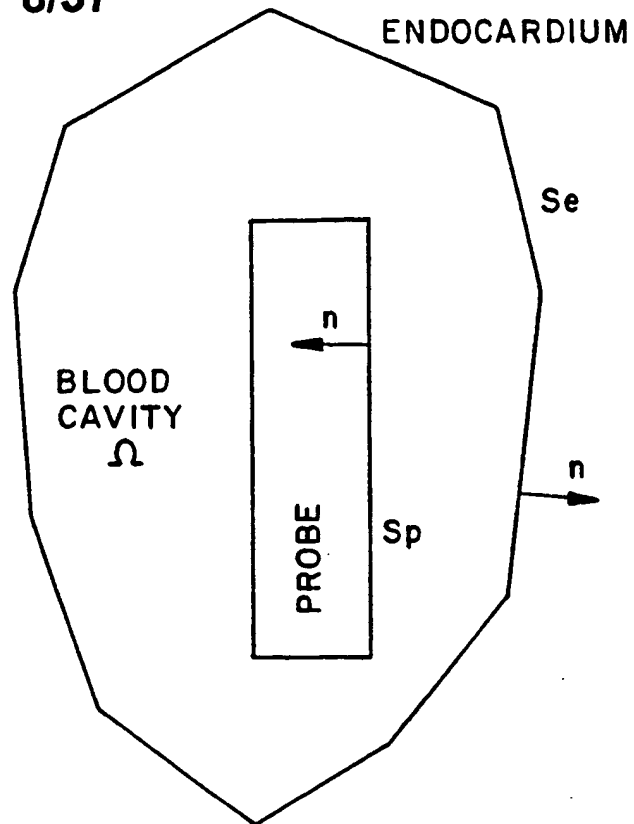


FIG. 14

SELECTED SITES FOR ELECTROGRAM DISPLAY

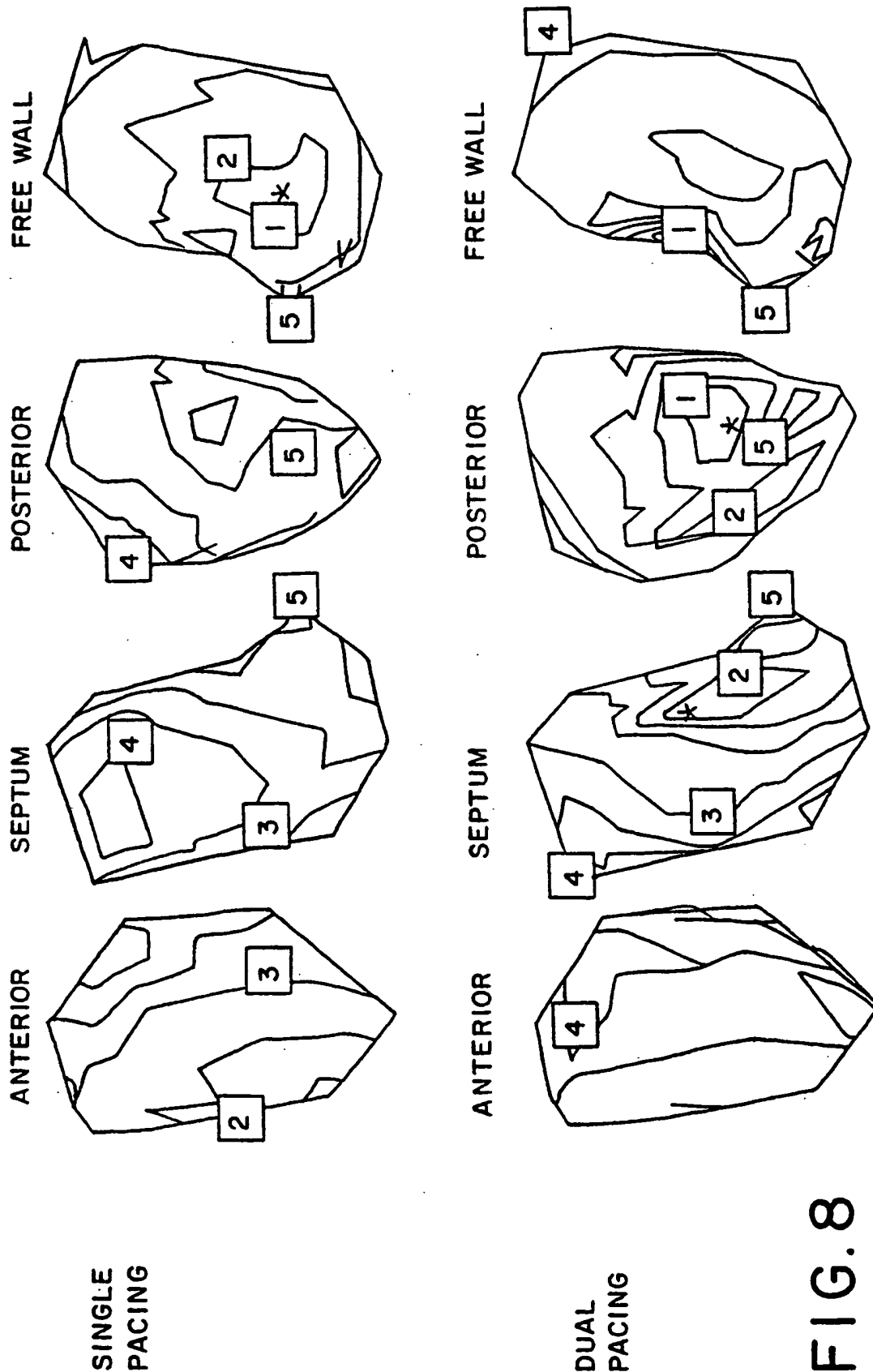
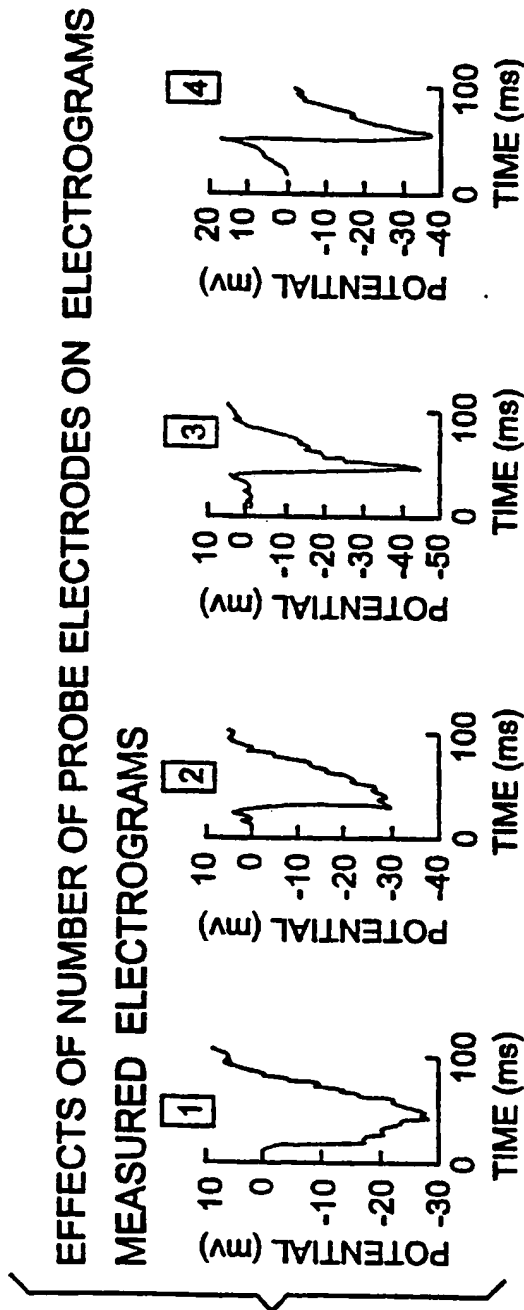


FIG.8

FIG. 9(a)



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FIG. 9(b)

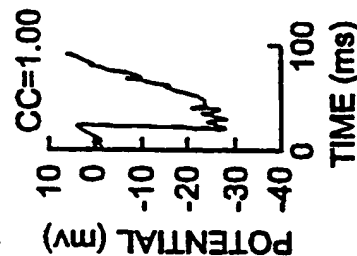
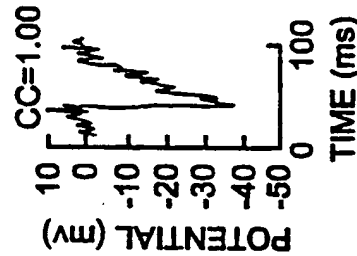
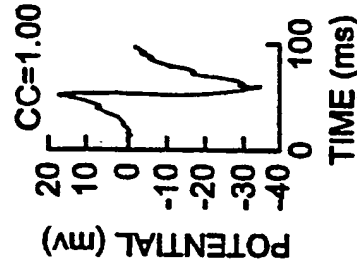
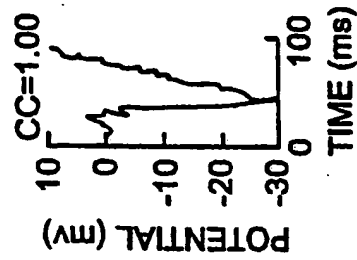
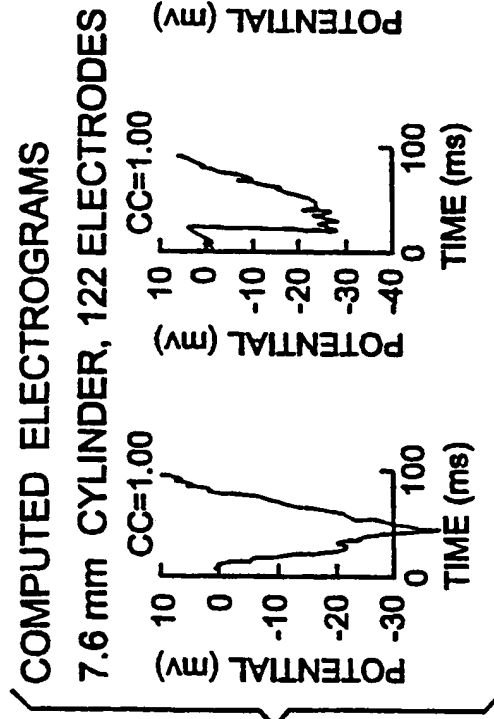
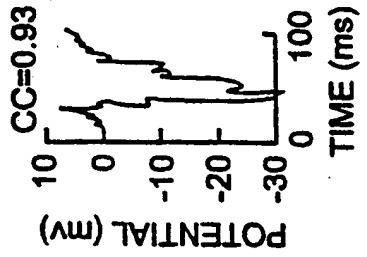
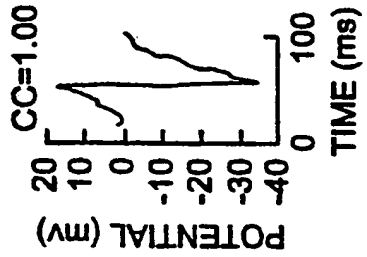
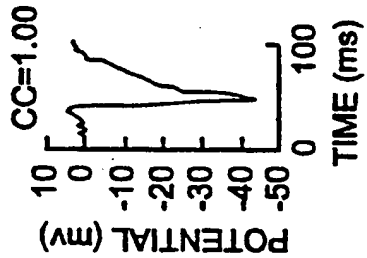
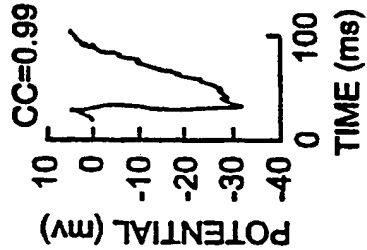
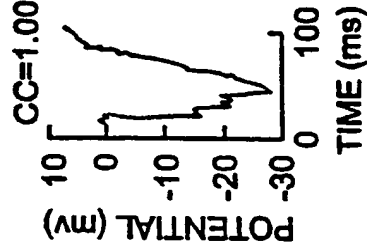


FIG. 9(c)

COMPUTED ELECTROGRAMS
3.0 mm CYLINDER, 122 ELECTRODES



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FIG. 9(d)

COMPUTED ELECTROGRAMS
3.0 mm J - SHAPED, 122 ELECTRODES

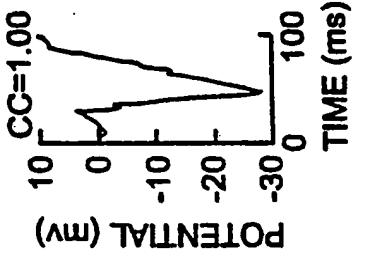
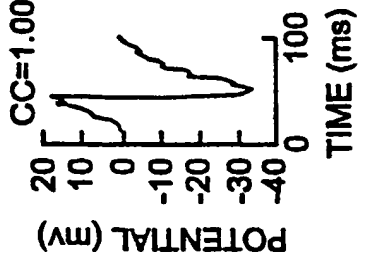
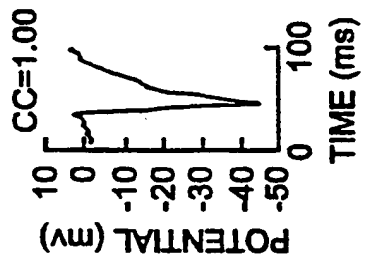
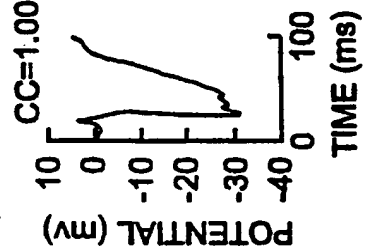
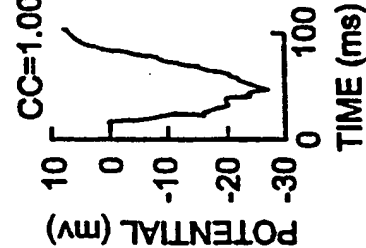
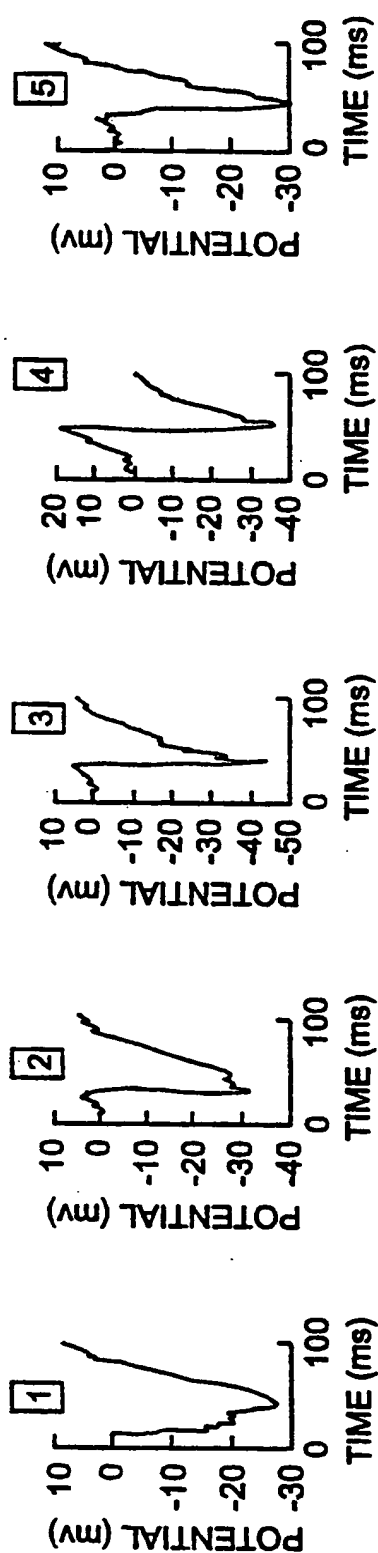


FIG. 10(a)

EFFECTS OF NUMBER OF PROBE ELECTRODES ON ELECTROGRAMS
MEASURED ELECTROGRAMS



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FIG. 10(b)

COMPUTED ELECTROGRAMS
7.6 mm CYLINDER, 62 ELECTRODES

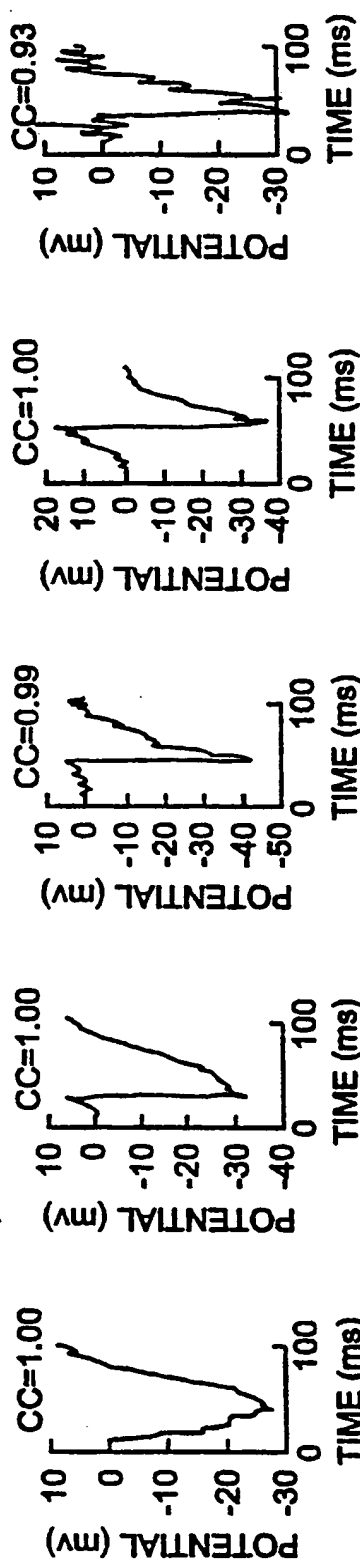
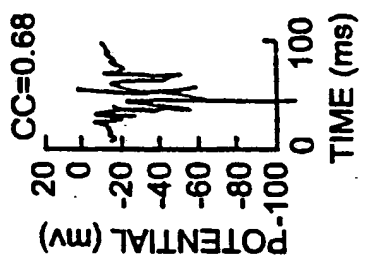
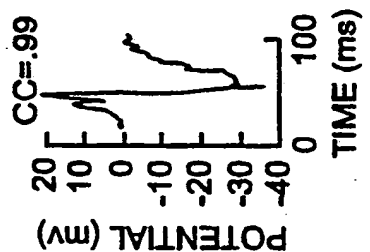
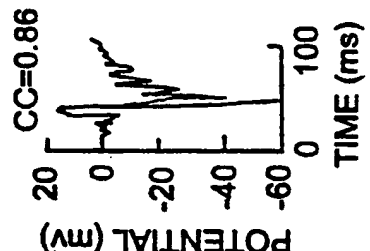
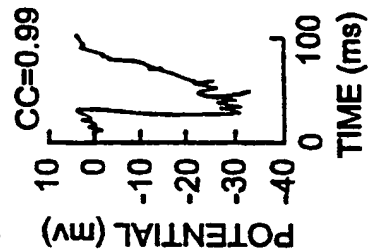
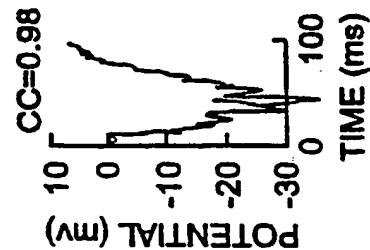


FIG. 10(c)

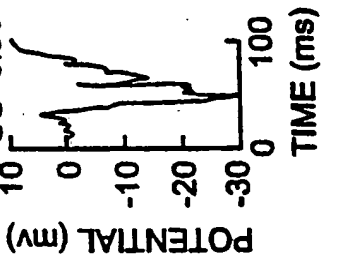
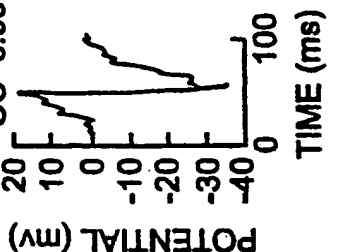
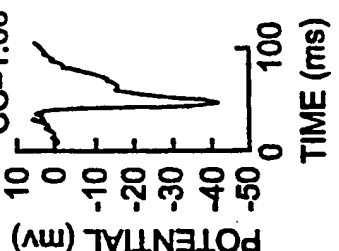
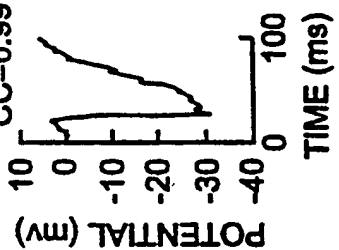
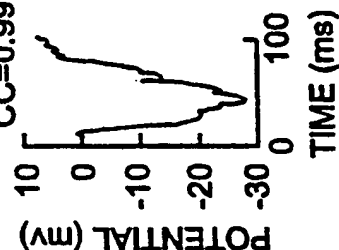
COMPUTED ELECTROGRAMS
3.0 mm CYLINDER, 62 ELECTRODES

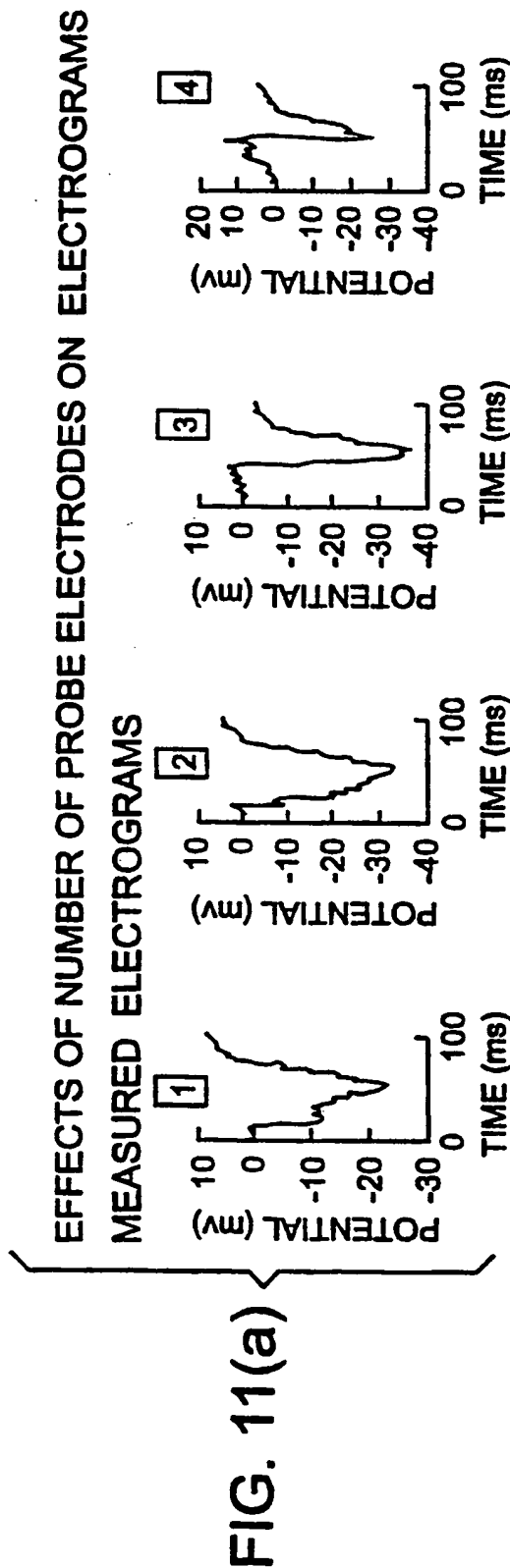


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FIG. 10(d)

COMPUTED ELECTROGRAMS
3.0 mm J - SHAPED, 62 ELECTRODES





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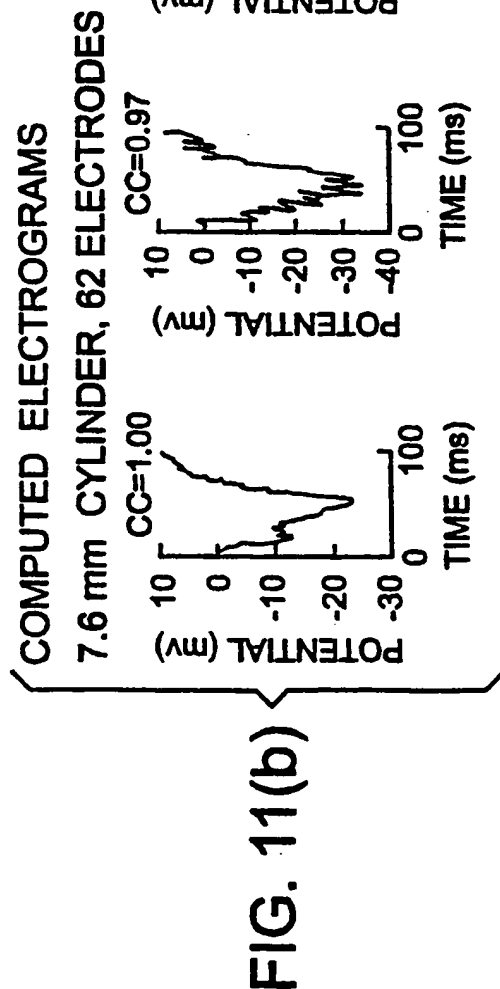
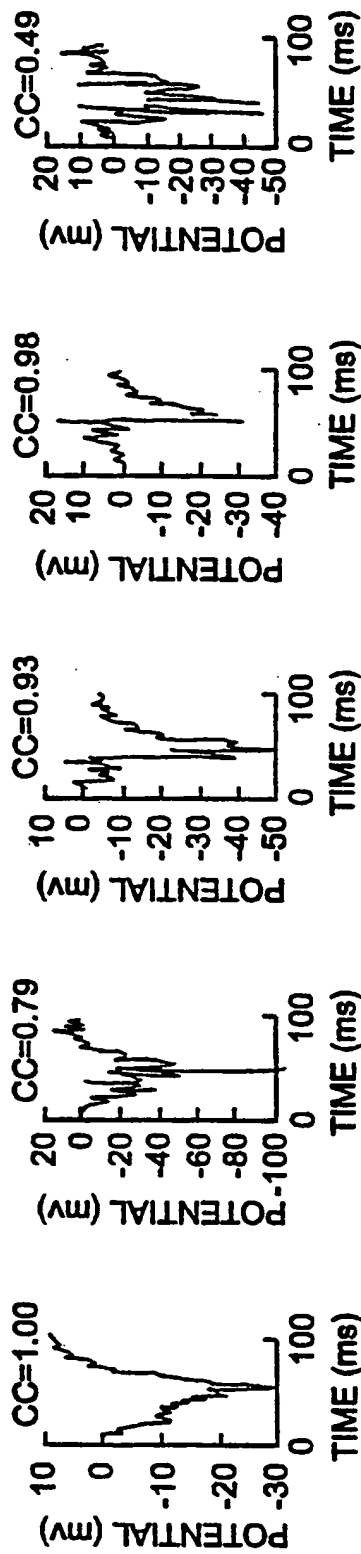


FIG. 11(c)

COMPUTED ELECTROGRAMS
3.0 mm CYLINDER, 62 ELECTRODES



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FIG. 11(d)

COMPUTED ELECTROGRAMS
3.0 mm J - SHAPED, 62 ELECTRODES

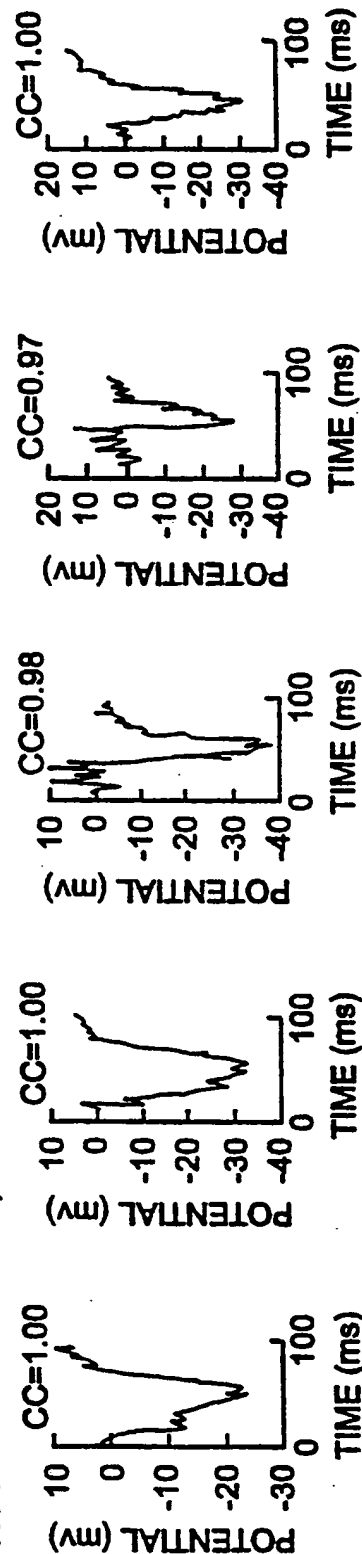


FIG. 12 EFFECTS OF NUMBER OF PROBE ELECTRODES ON ISOCHRONE MAP

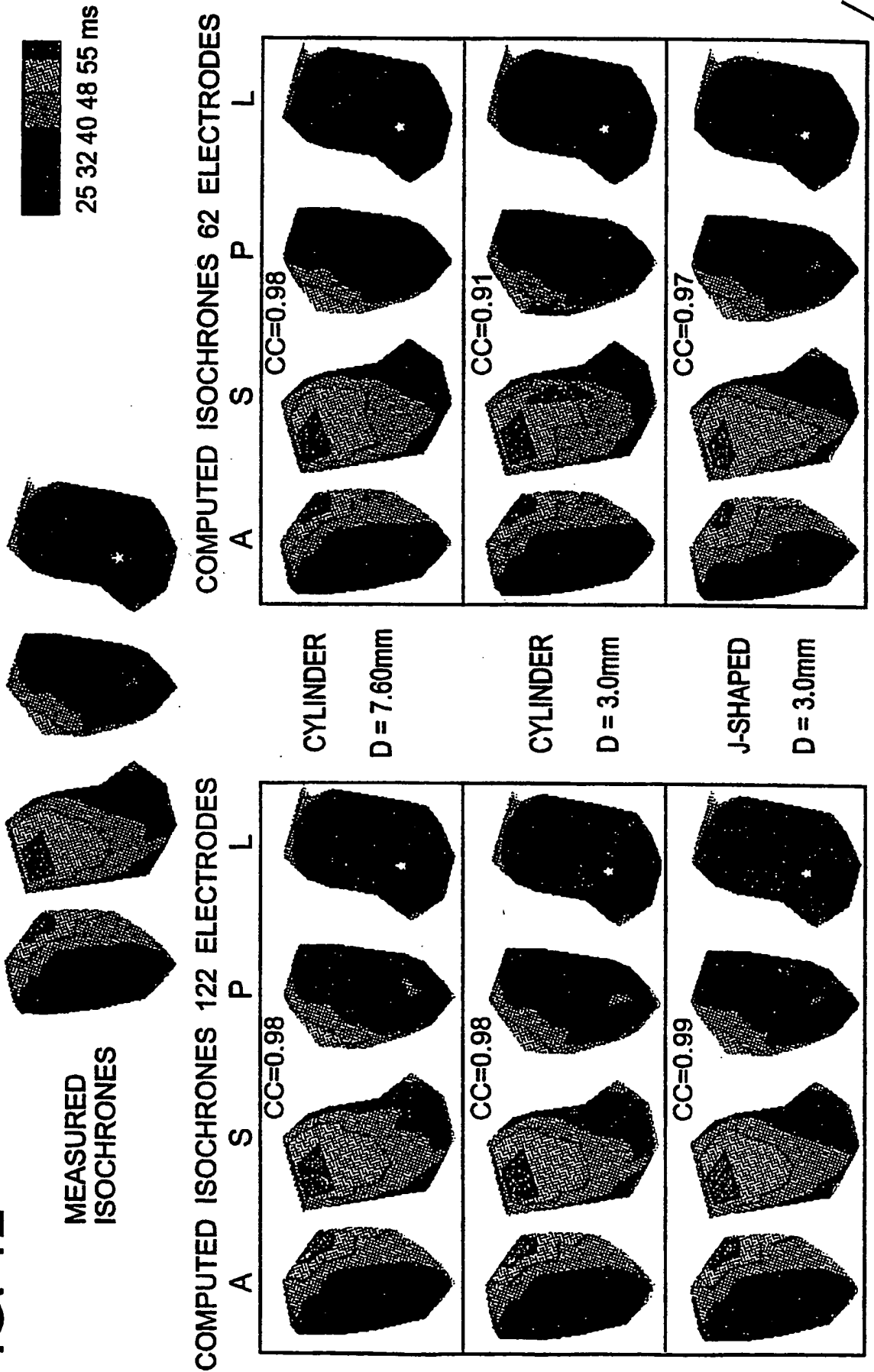


FIG. 13 EFFECTS OF NUMBER OF PROBE ELECTRODES ON ISOCHRONE MAP

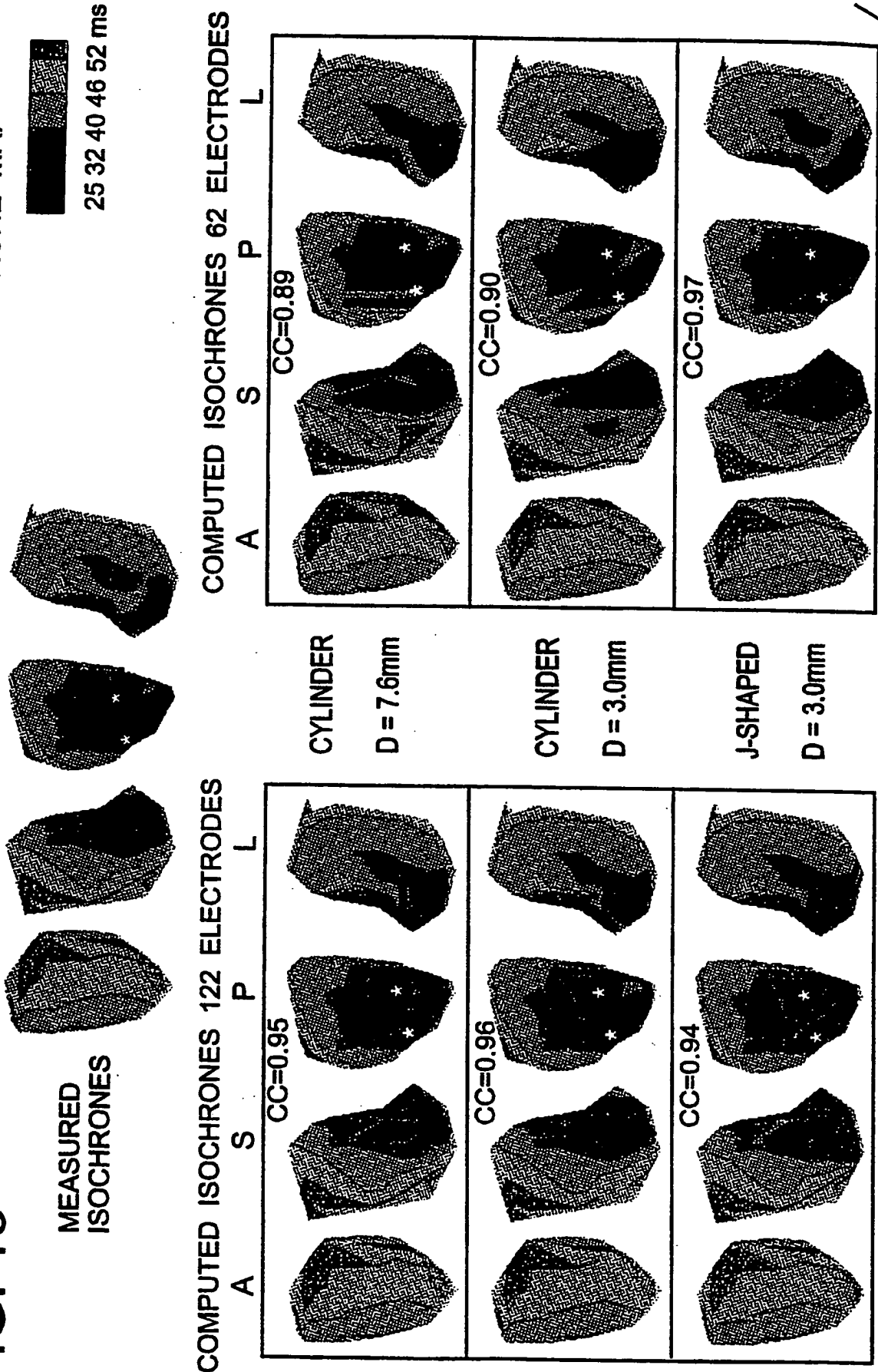
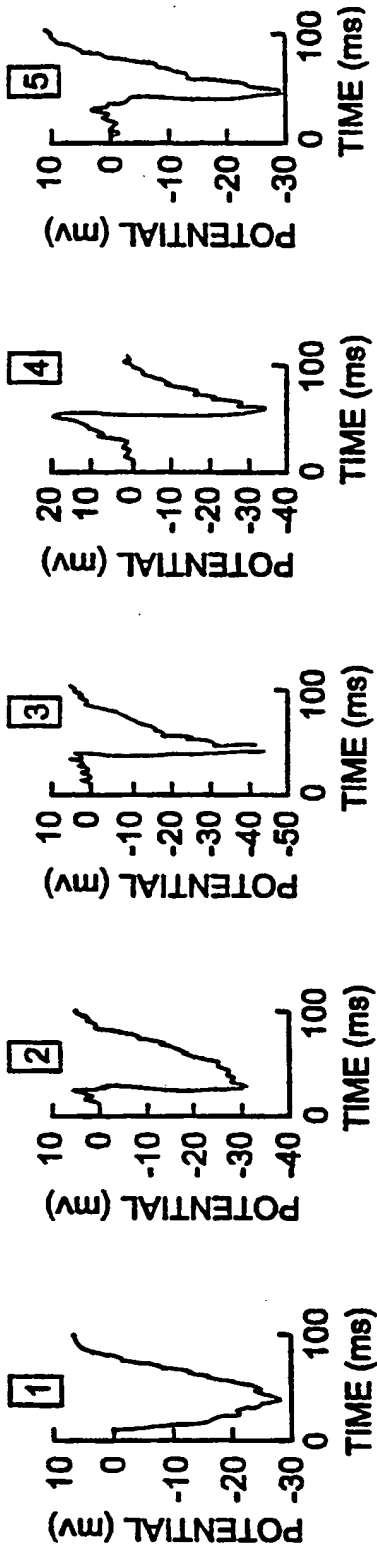


FIG. 15(a)

EFFECTS OF PROBE ROTATION ON ELECTROGRAMS
MEASURED ELECTROGRAMS



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COMPUTED ELECTROGRAMS
7.6 mm CYLINDER, 62 ELECTRODES

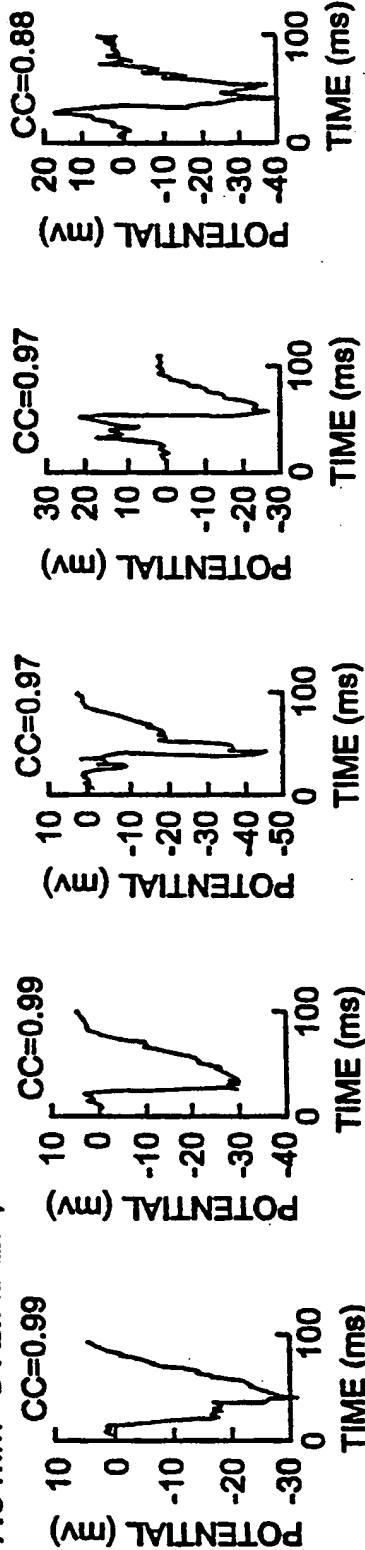
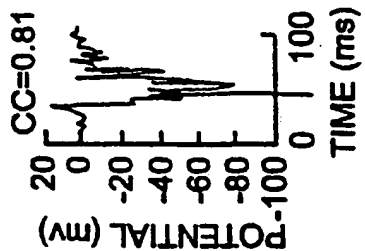
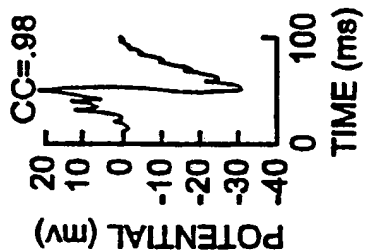
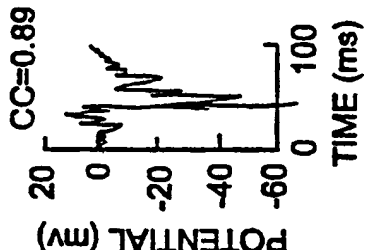
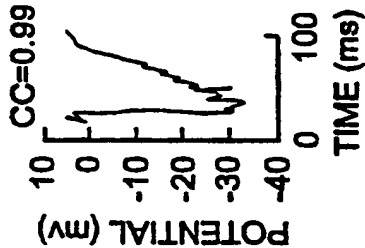
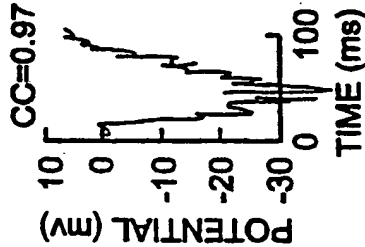


FIG. 15(b)

FIG. 15(c)

COMPUTED ELECTROGRAMS
3.0 mm CYLINDER, 62 ELECTRODES



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FIG. 15(d)

COMPUTED ELECTROGRAMS
3.0 mm J - SHAPED, 62 ELECTRODES

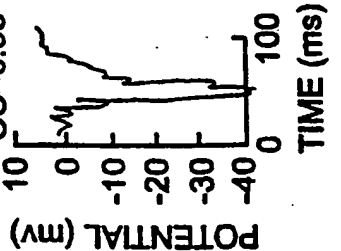
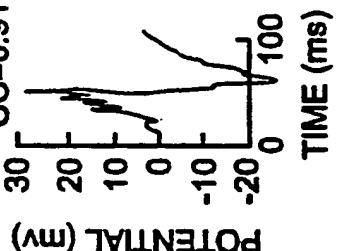
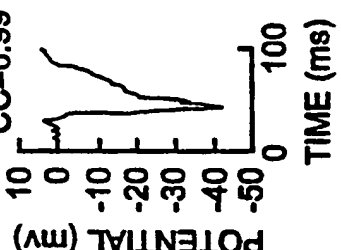
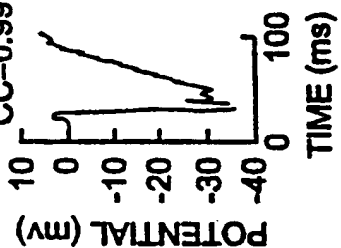
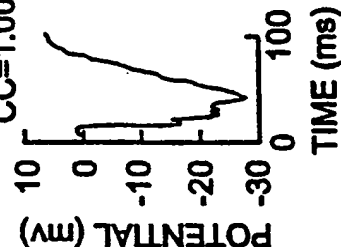


FIG. 16 EFFECTS OF PROBE ROTATION ON ISOCHRONE MAP
MEASURED ISOCHRONES

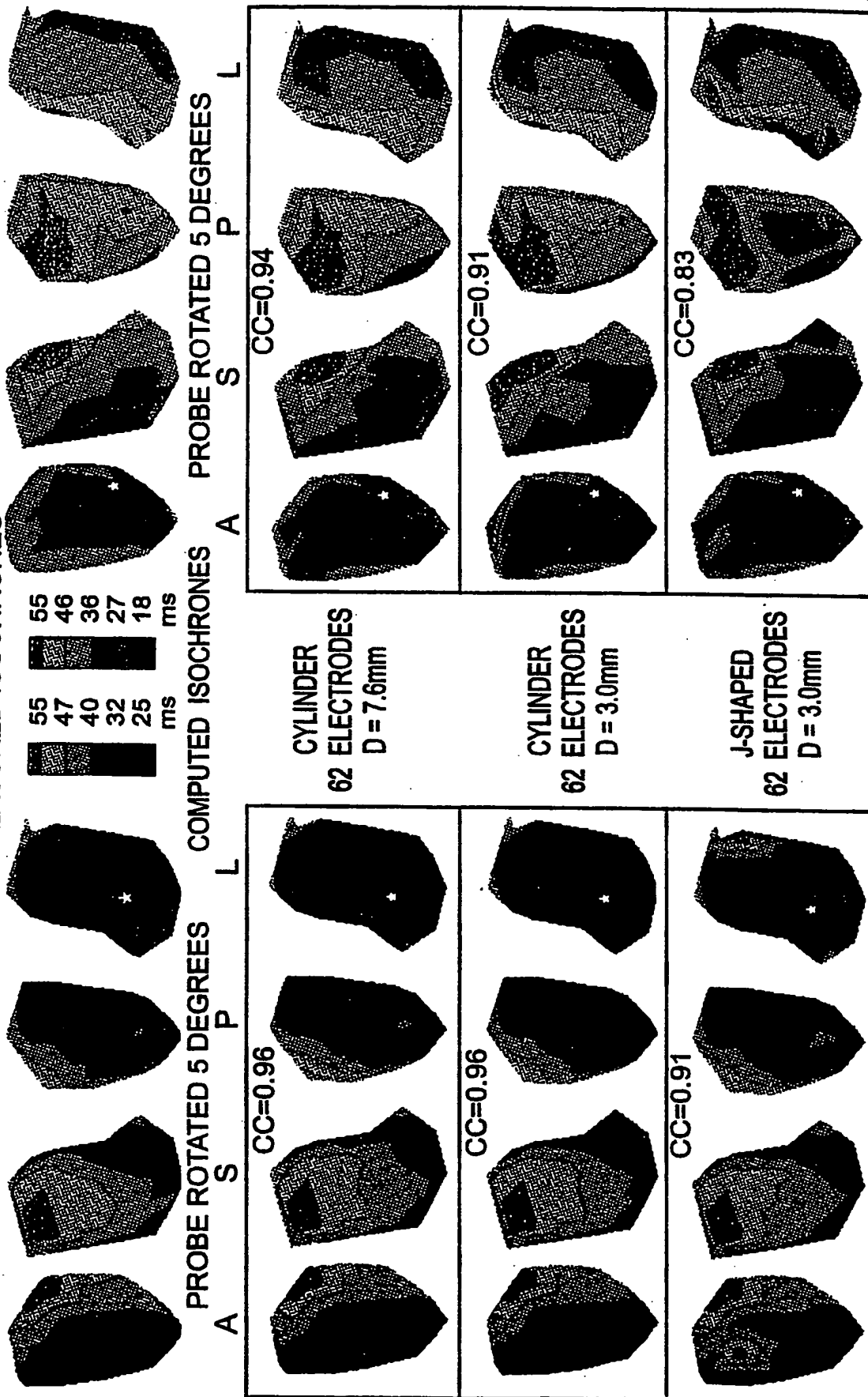


FIG. 17 EFFECTS OF PROBE ROTATION ON ISOCHRONE MAP

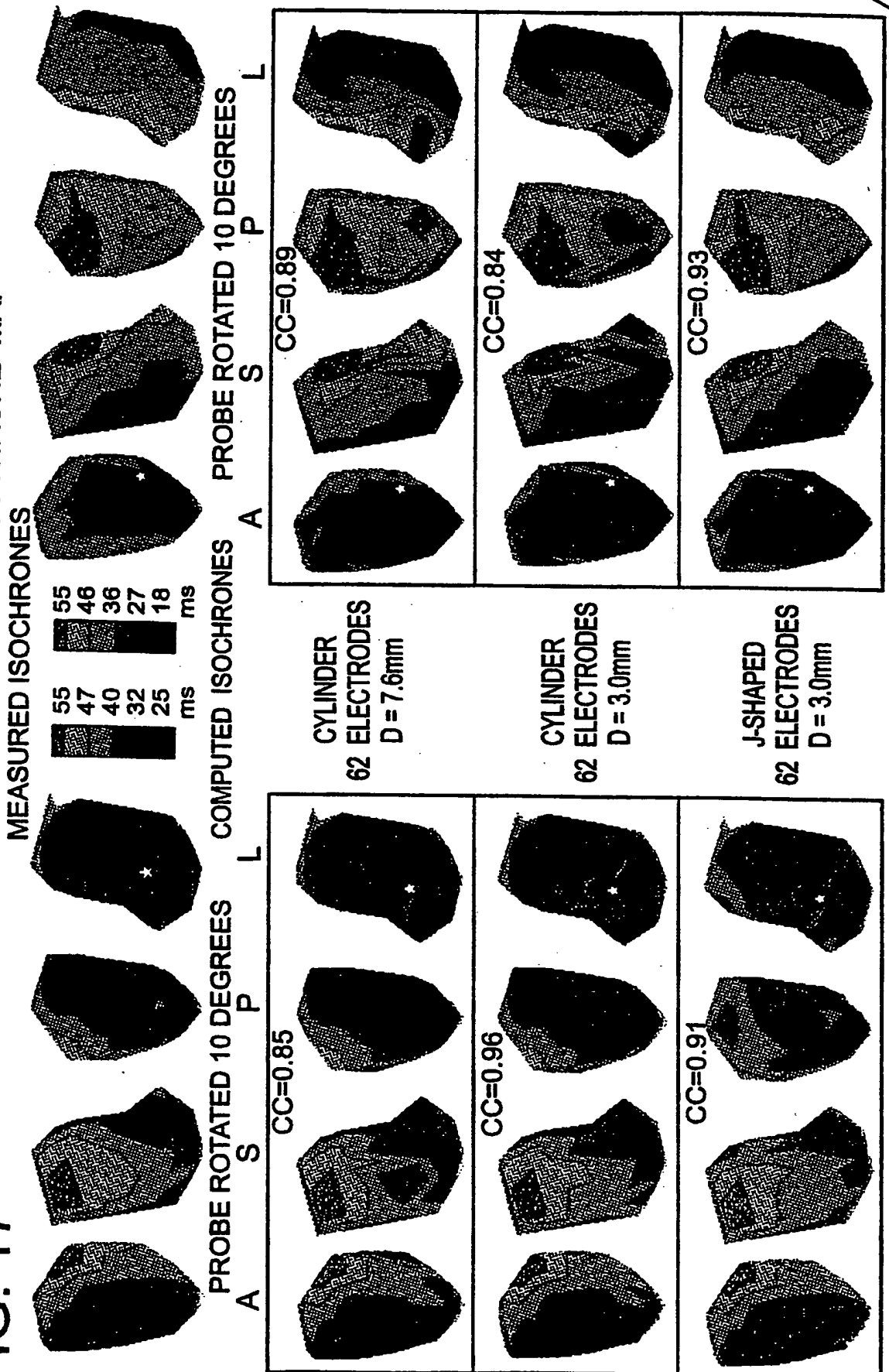
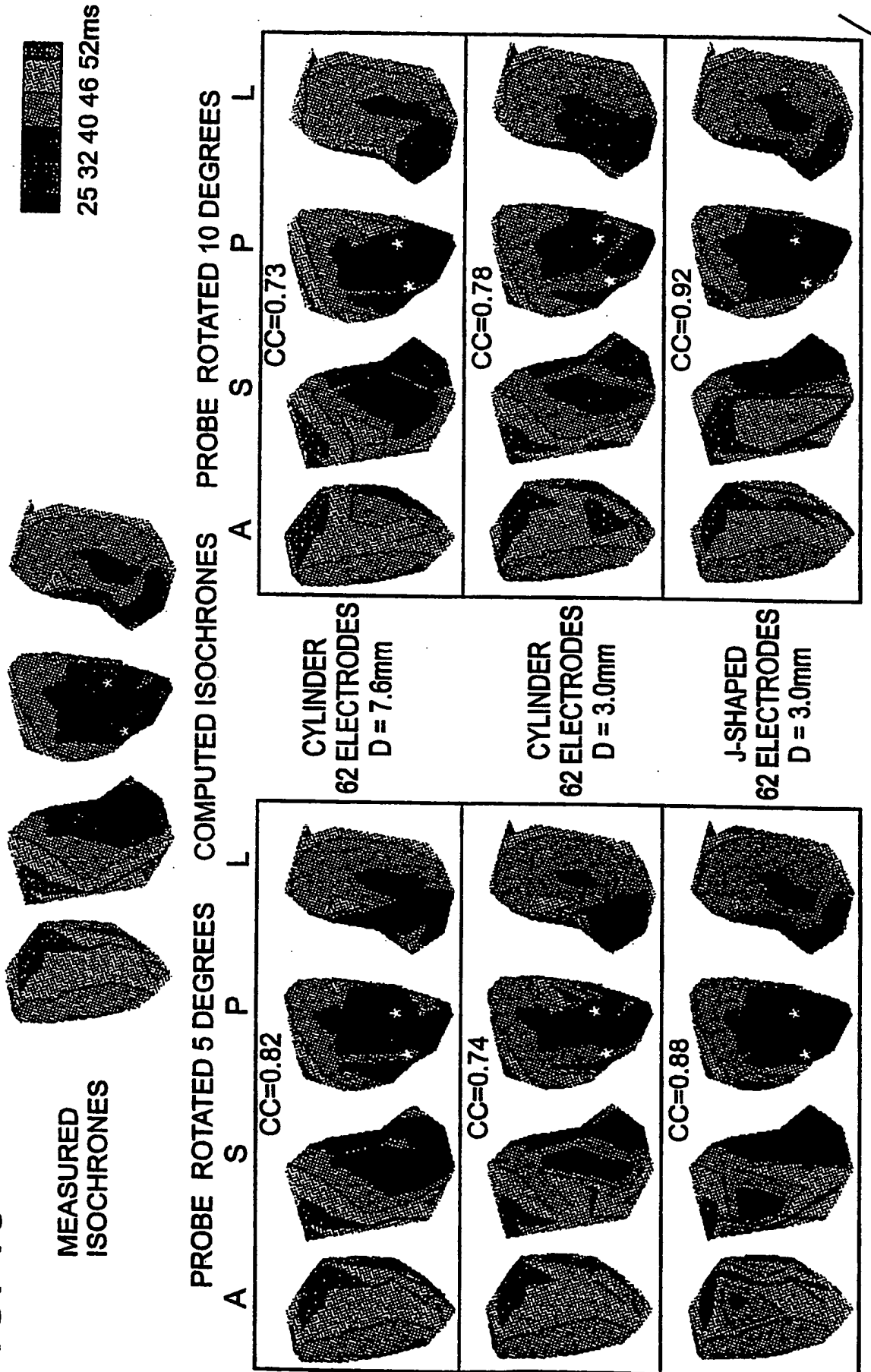
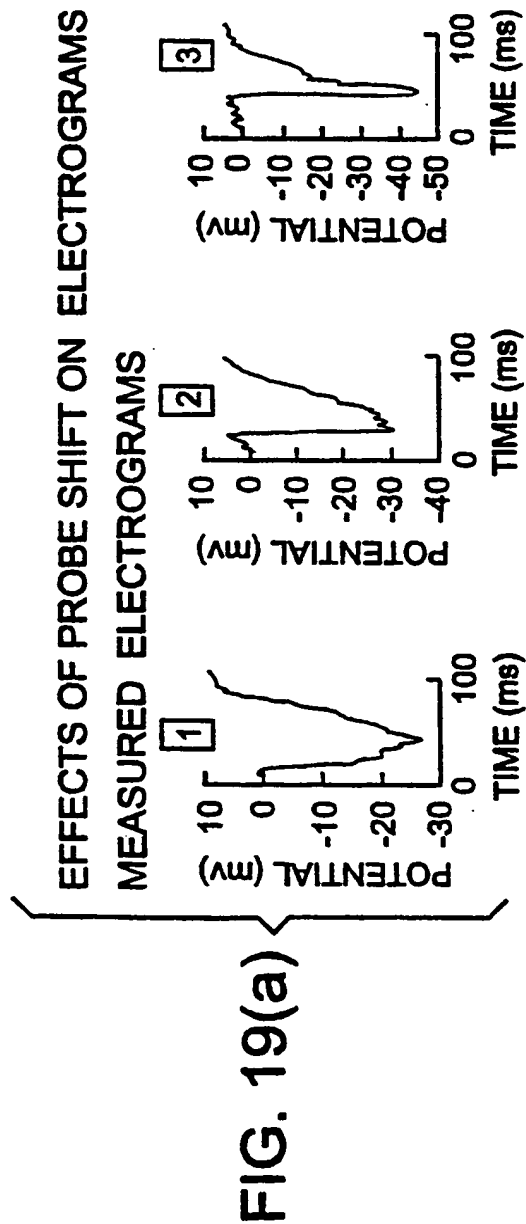


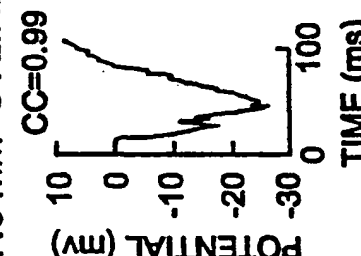
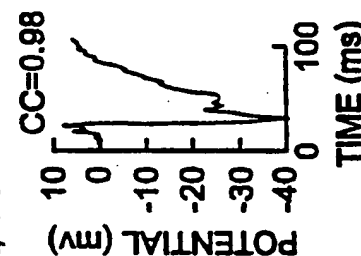
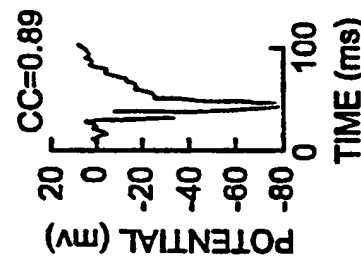
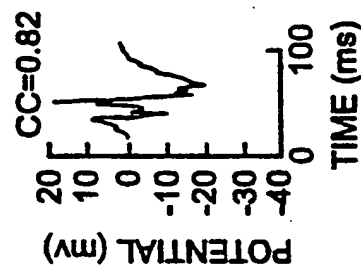
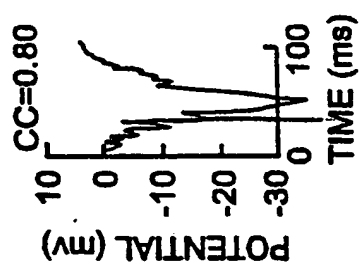
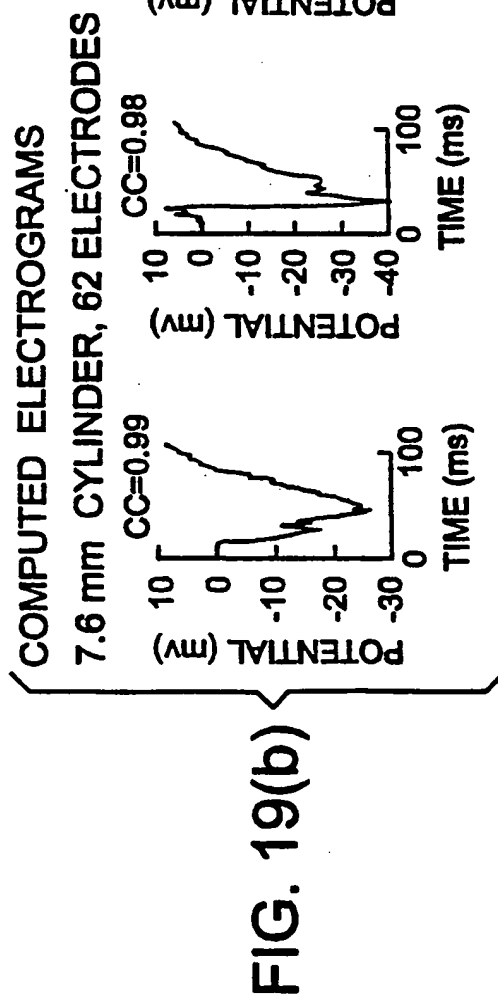
FIG. 18

EFFECTS OF PROBE ROTATION ON ISOCHRONE MAP





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COMPUTED ELECTROGRAMS
3.0 mm CYLINDER, 62 ELECTRODES

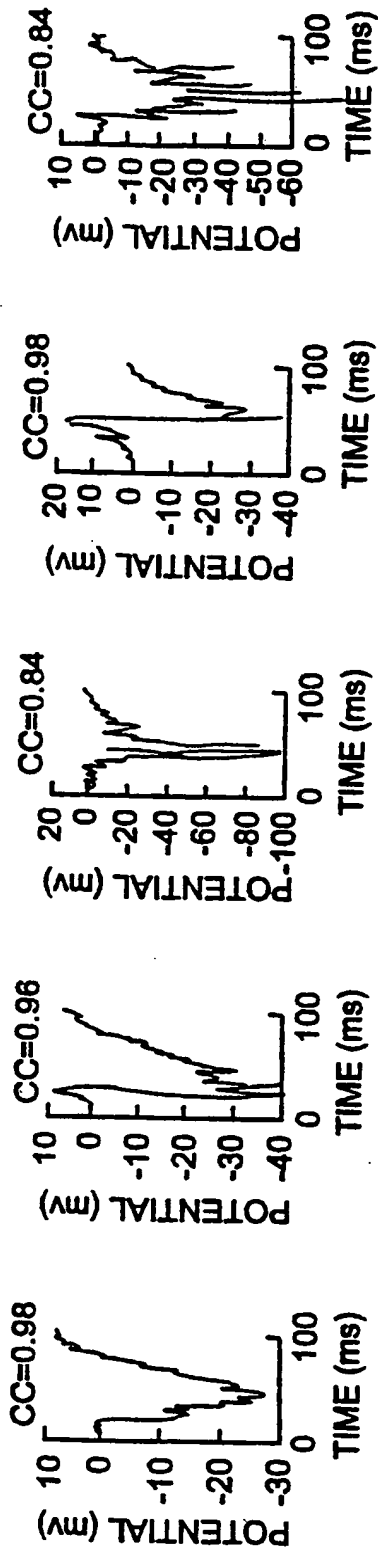


FIG. 19(c)

COMPUTED ELECTROGRAMS
3.0 mm J - SHAPED, 62 ELECTRODES

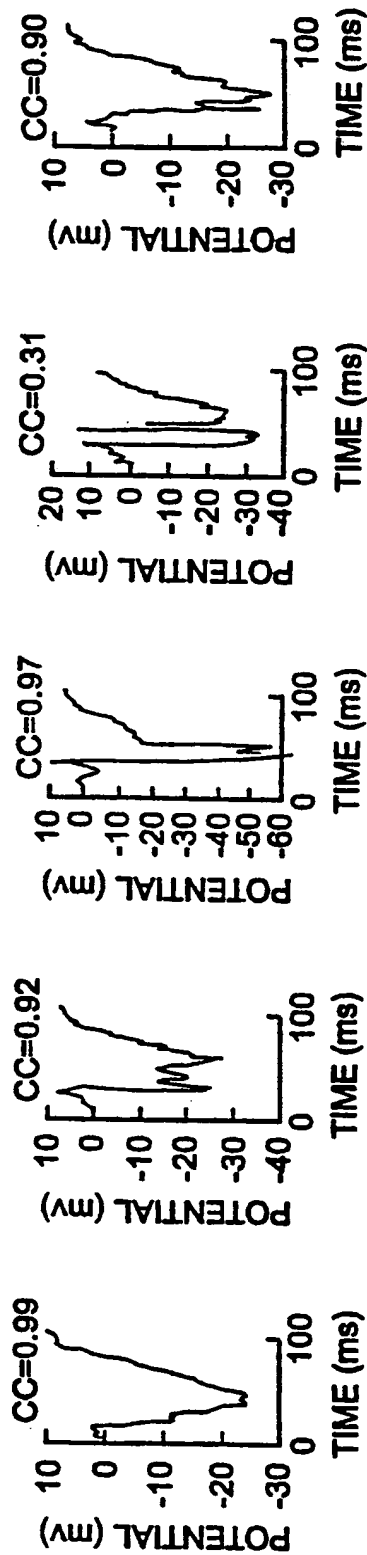


FIG. 19(d)

FIG. 20

EFFECTS OF PROBE SHIFT ON ISOCHRONE MAP

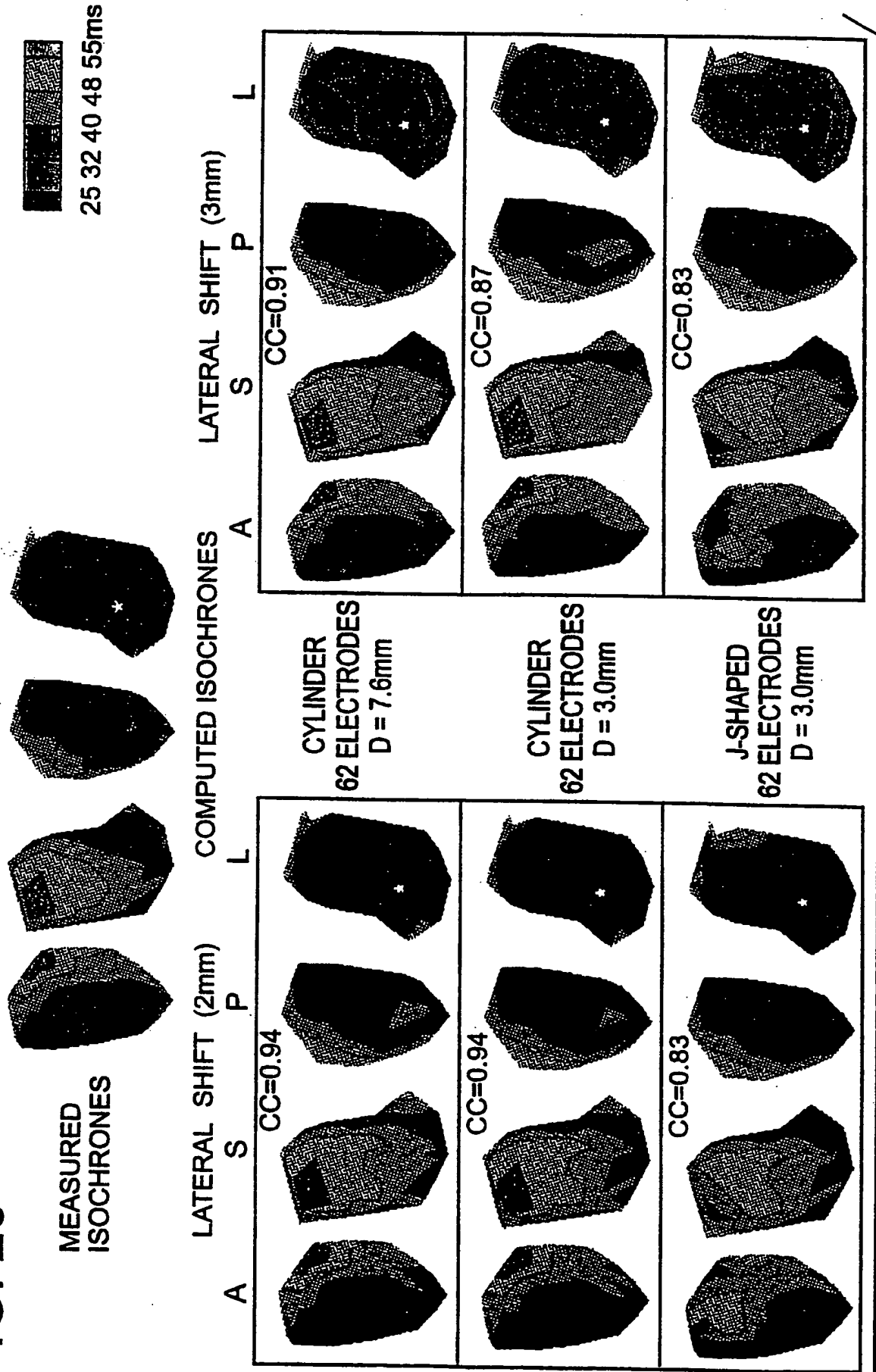


FIG. 21

EFFECTS OF PROBE SHIFT ON ISOCHRONE MAP

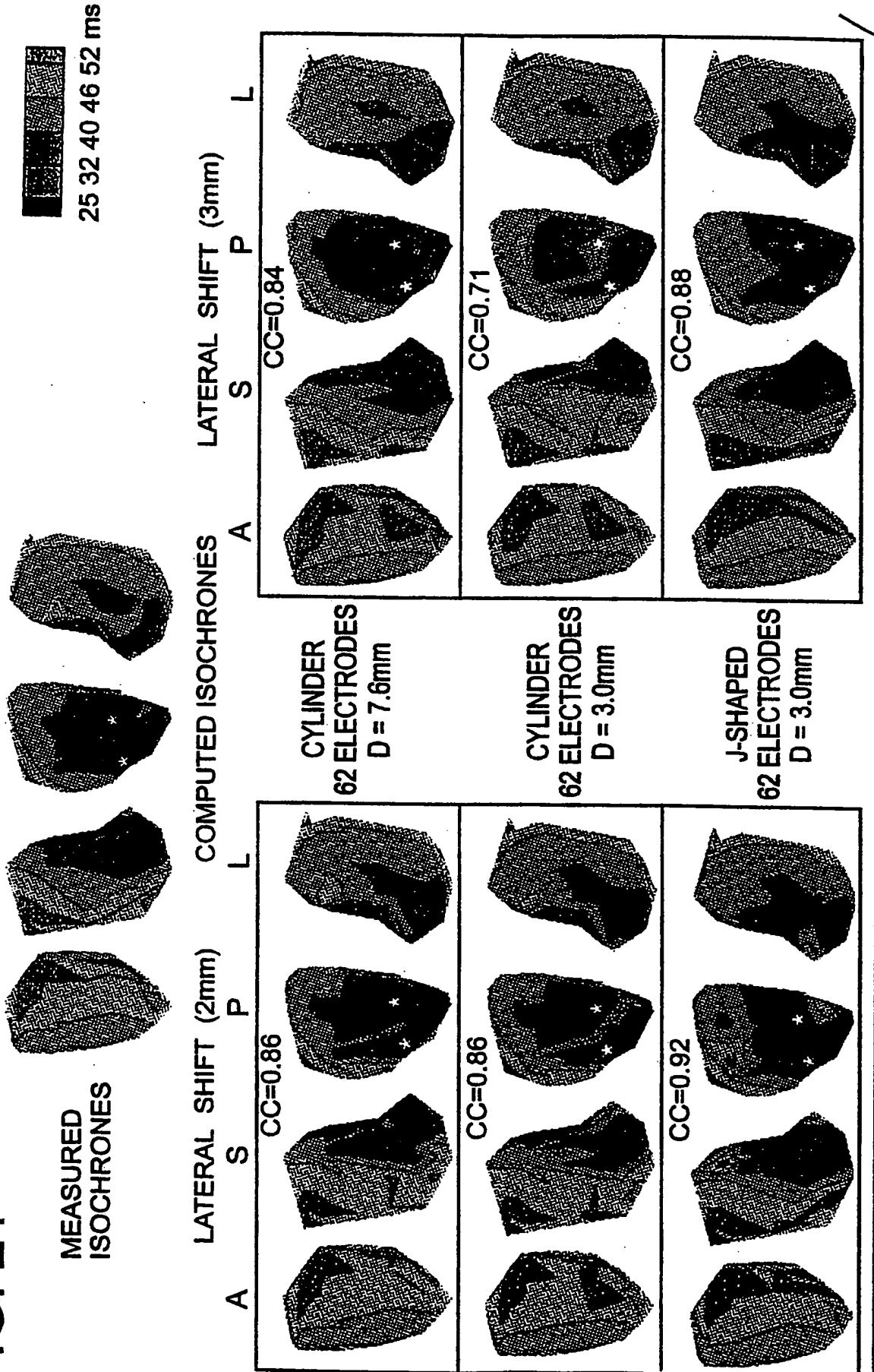
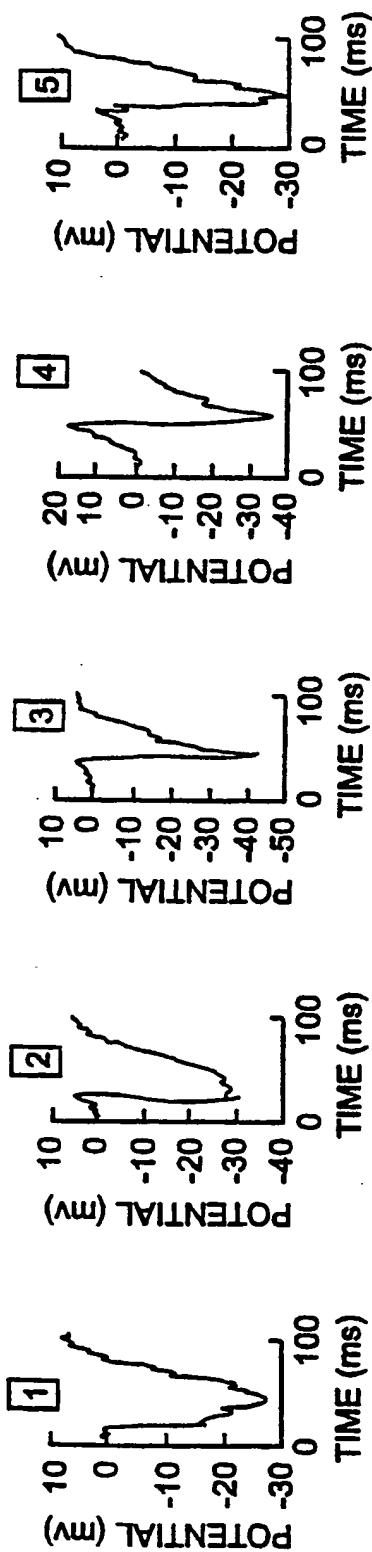


FIG. 22(a)

EFFECTS OF J-PROBE TWIST ON ELECTROGRAMS
MEASURED ELECTROGRAMS



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FIG. 22(b)

COMPUTED ELECTROGRAMS
3.0 mm J-SHAPED, 62 ELECTRODES, TWISTED 5 DEGREES

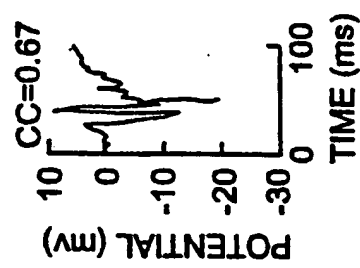
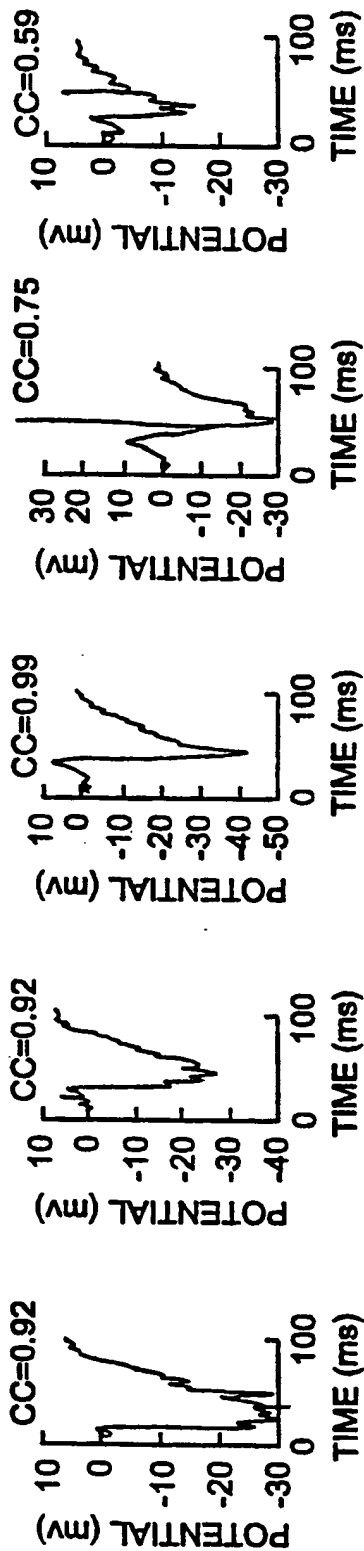


FIG. 22(c)

COMPUTED ELECTROGRAMS

3.0 mm J - SHAPED, 62 ELECTRODES, TWISTED 10 DEGREES



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FIG. 22(d)

COMPUTED ELECTROGRAMS

3.0 mm J - SHAPED, 62 ELECTRODES, TWISTED 15 DEGREES

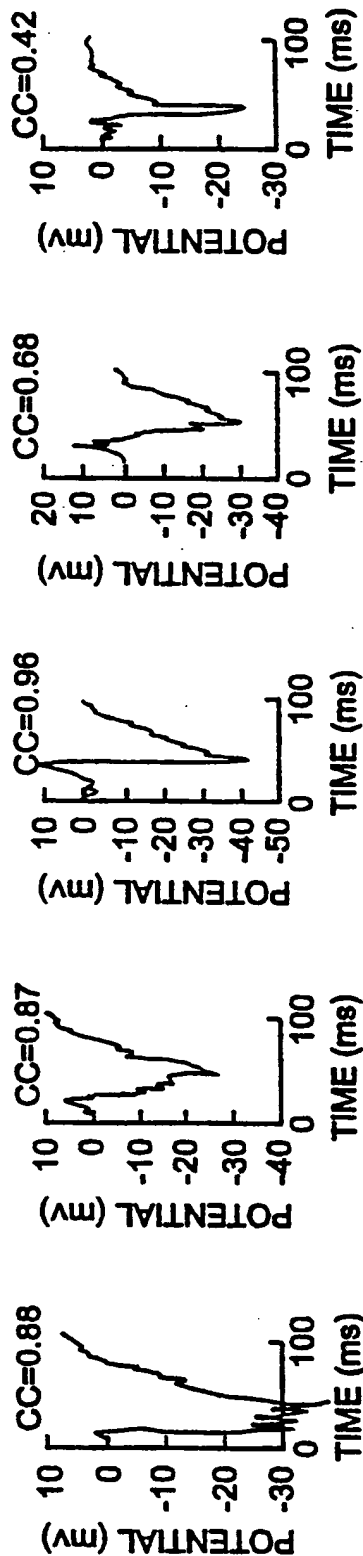
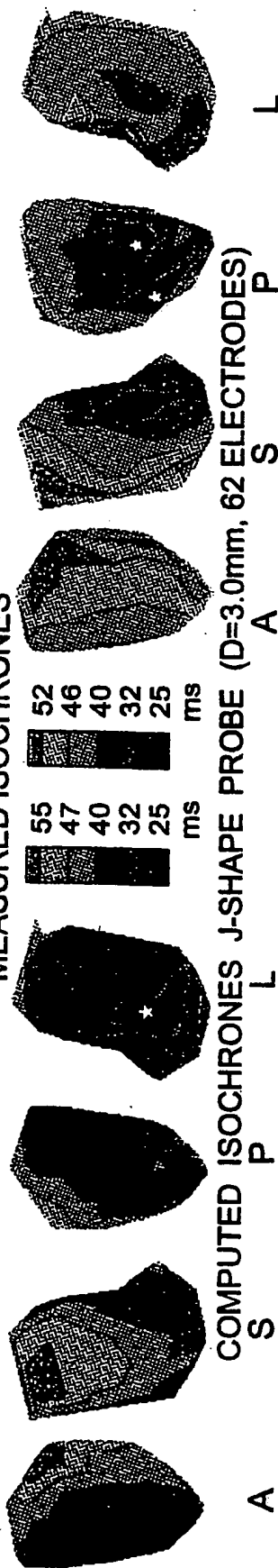
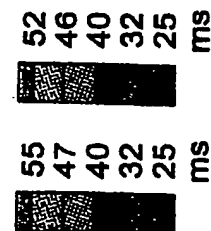


FIG. 23

EFFECTS OF J-PROBE TWIST ON ISOCHRONE MAP

MEASURED ISOCHRONES



COMPUTED ISOCHRONES J-SHAPE PROBE (D=3.0mm, 62 ELECTRODES)

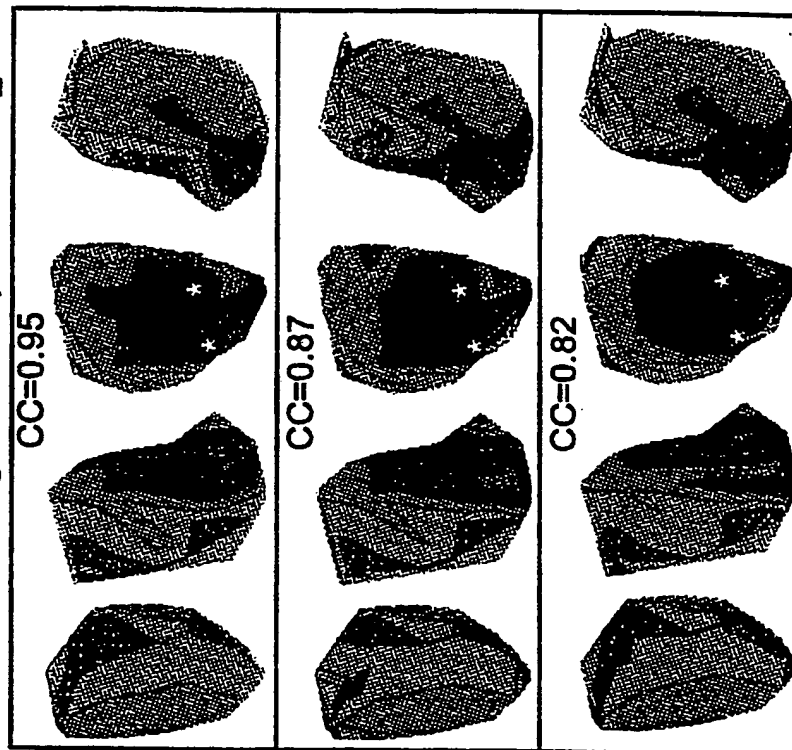
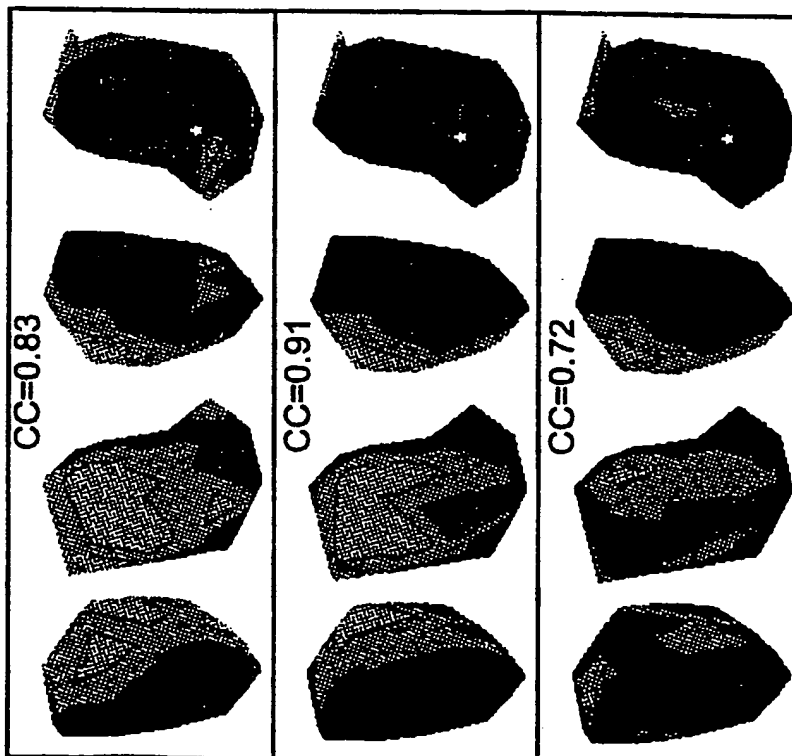
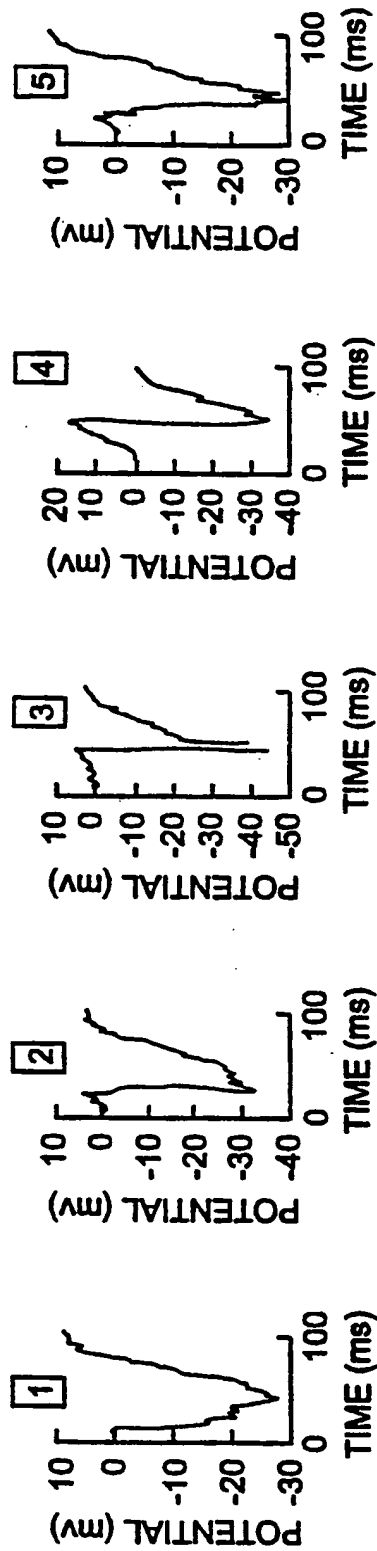


FIG. 24(a)

EFFECTS OF CATHETER PROBE SHAPE ON ELECTROGRAMS
MEASURED ELECTROGRAMS



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COMPUTED ELECTROGRAMS
3.0 mm CYLINDER, 62 ELECTRODES

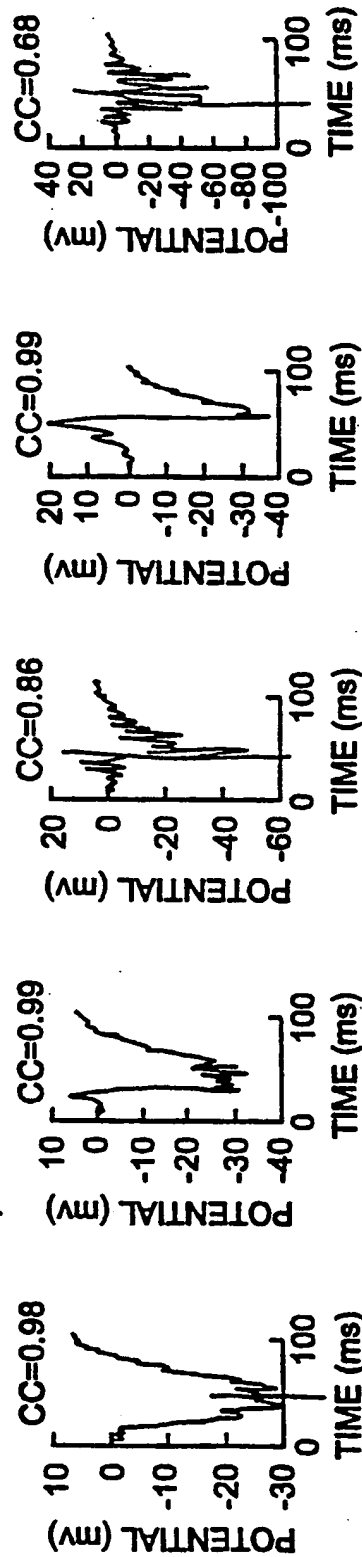
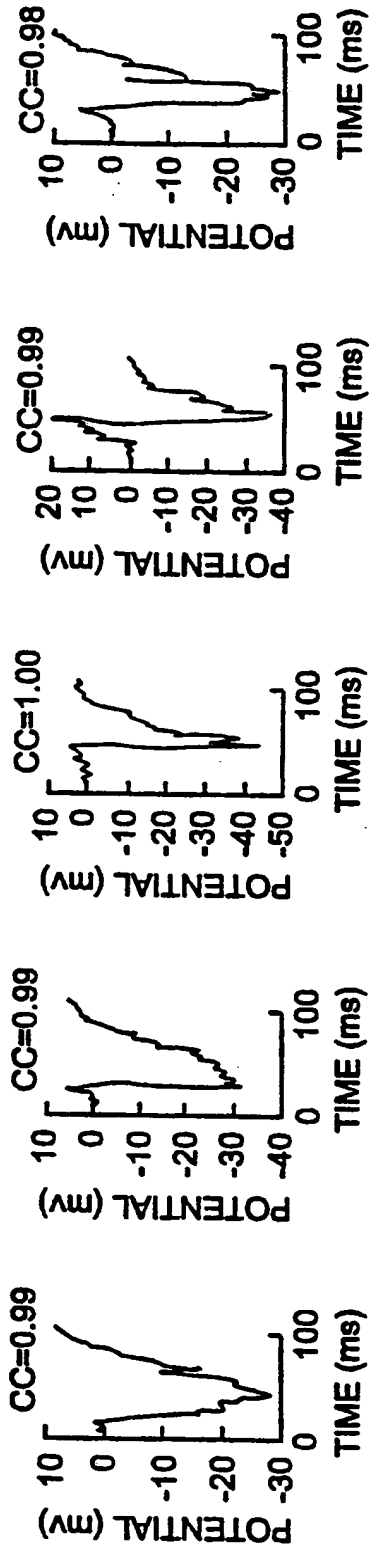


FIG. 24(b)

FIG. 24(c)

COMPUTED ELECTROGRAMS
3.0 mm J - SHAPED, 62 ELECTRODES



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FIG. 24(d)

COMPUTED ELECTROGRAMS
3.0 mm U - SHAPED, 62 ELECTRODES

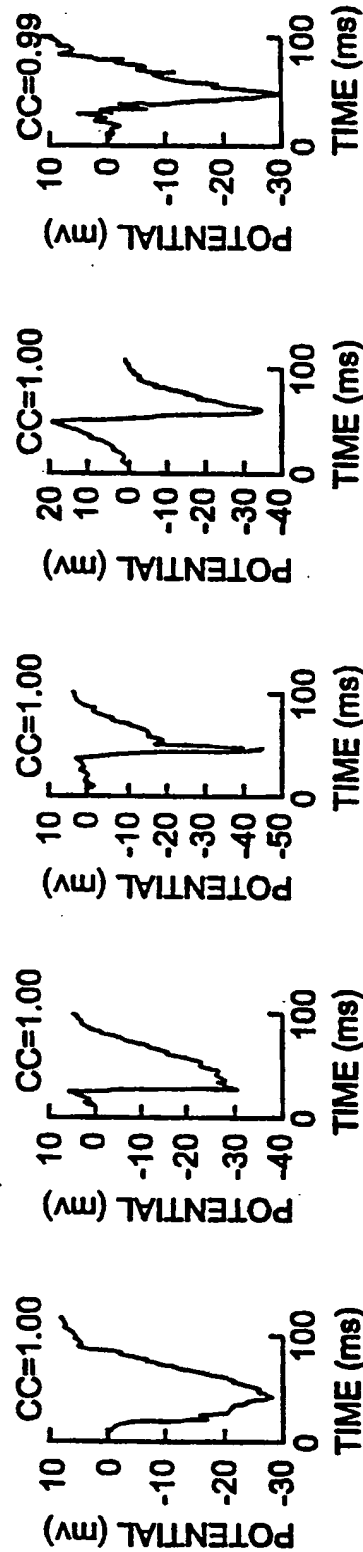
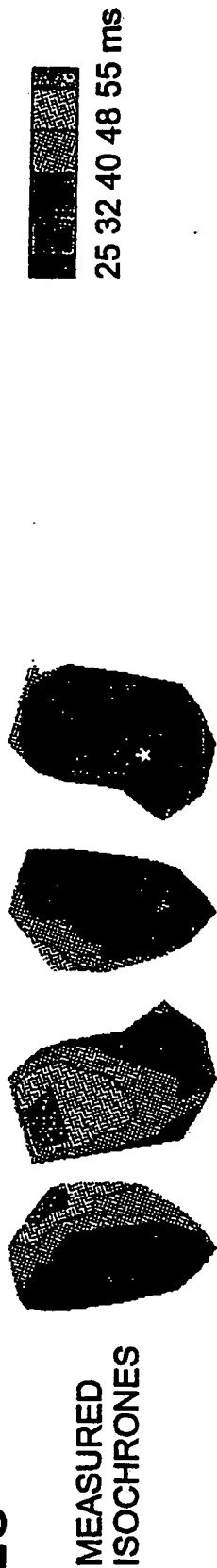
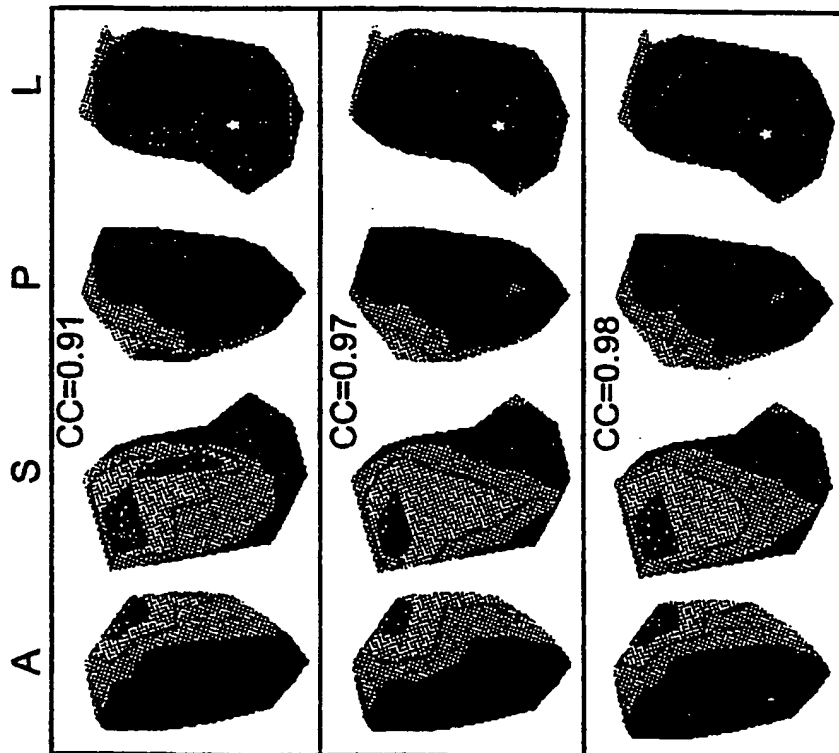


FIG. 25

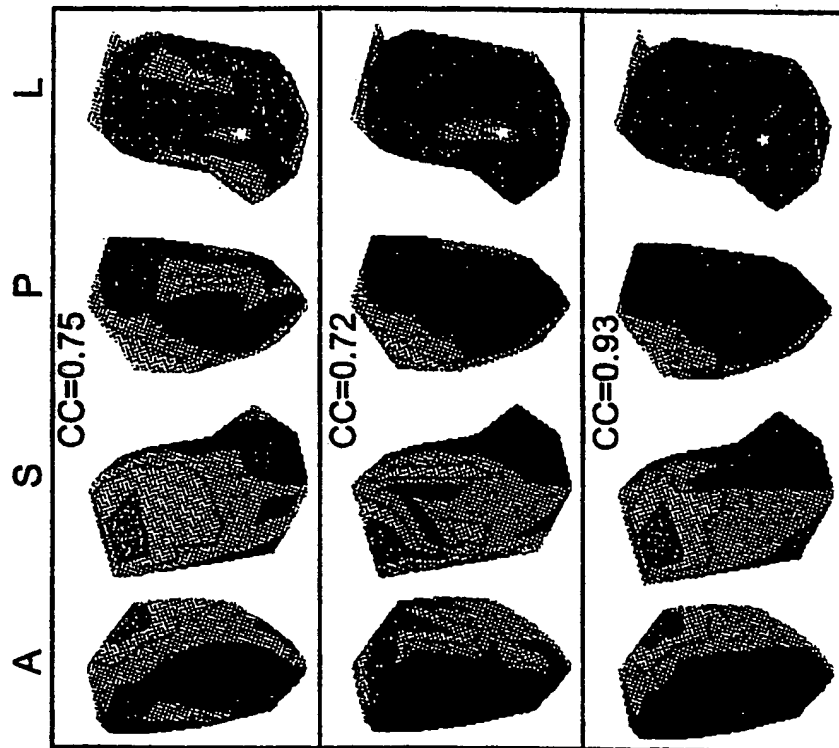
EFFECTS OF CATHETER SHAPE ON ISOCHRONE MAP



COMPUTED ISOCHRONES 62 ELECTRODES



COMPUTED ISOCHRONES 42 ELECTRODES



CYLINDER

D = 3.0mm

J-SHAPED

D = 3.0mm

U-SHAPED

D = 3.0mm

FIG. 26

EFFECTS OF CATHETER SHAPE ON ISOCHRONE MAP

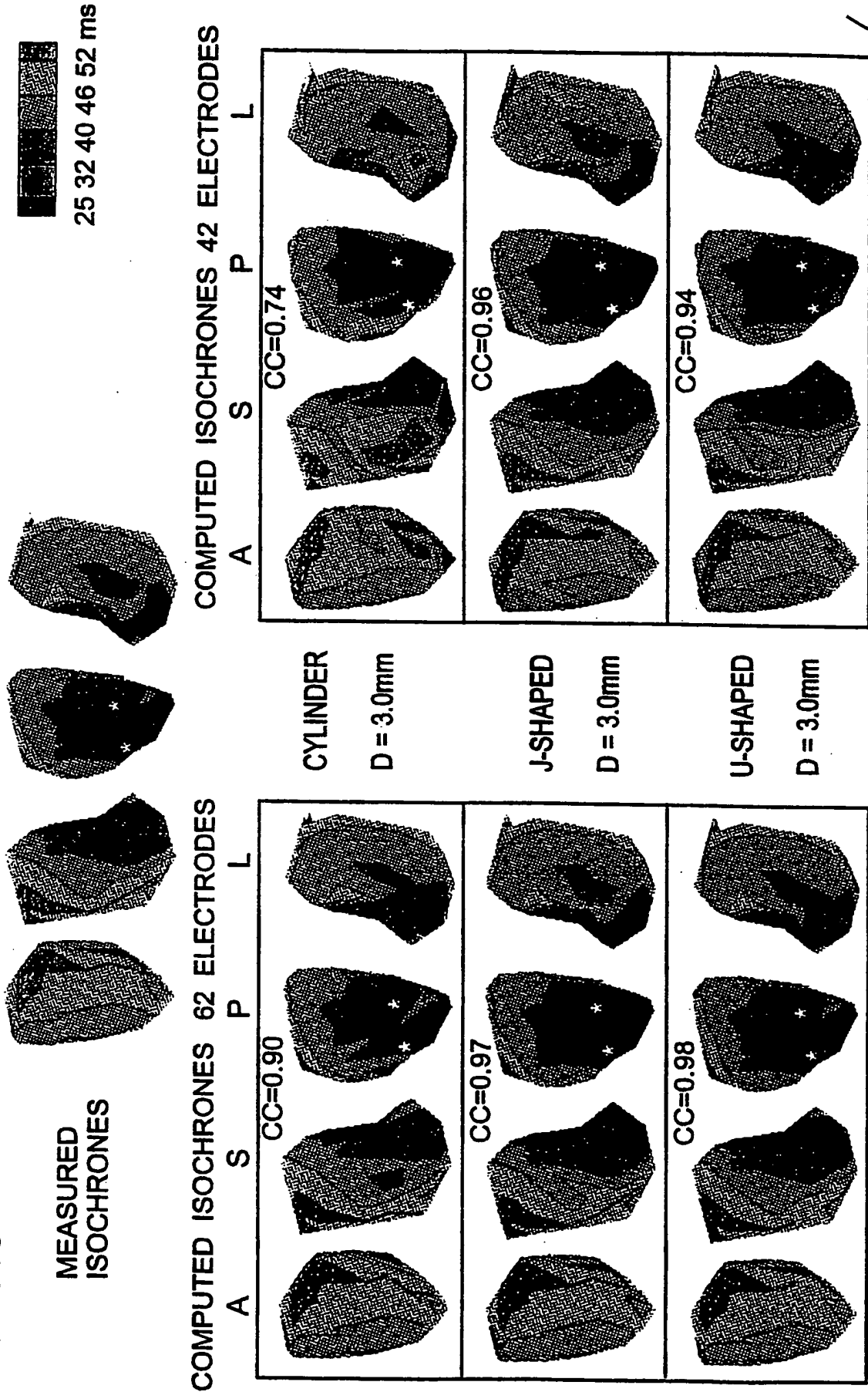


FIG. 27

EFFECTS OF CATHETER SHAPE ON ISOCHRONE MAP

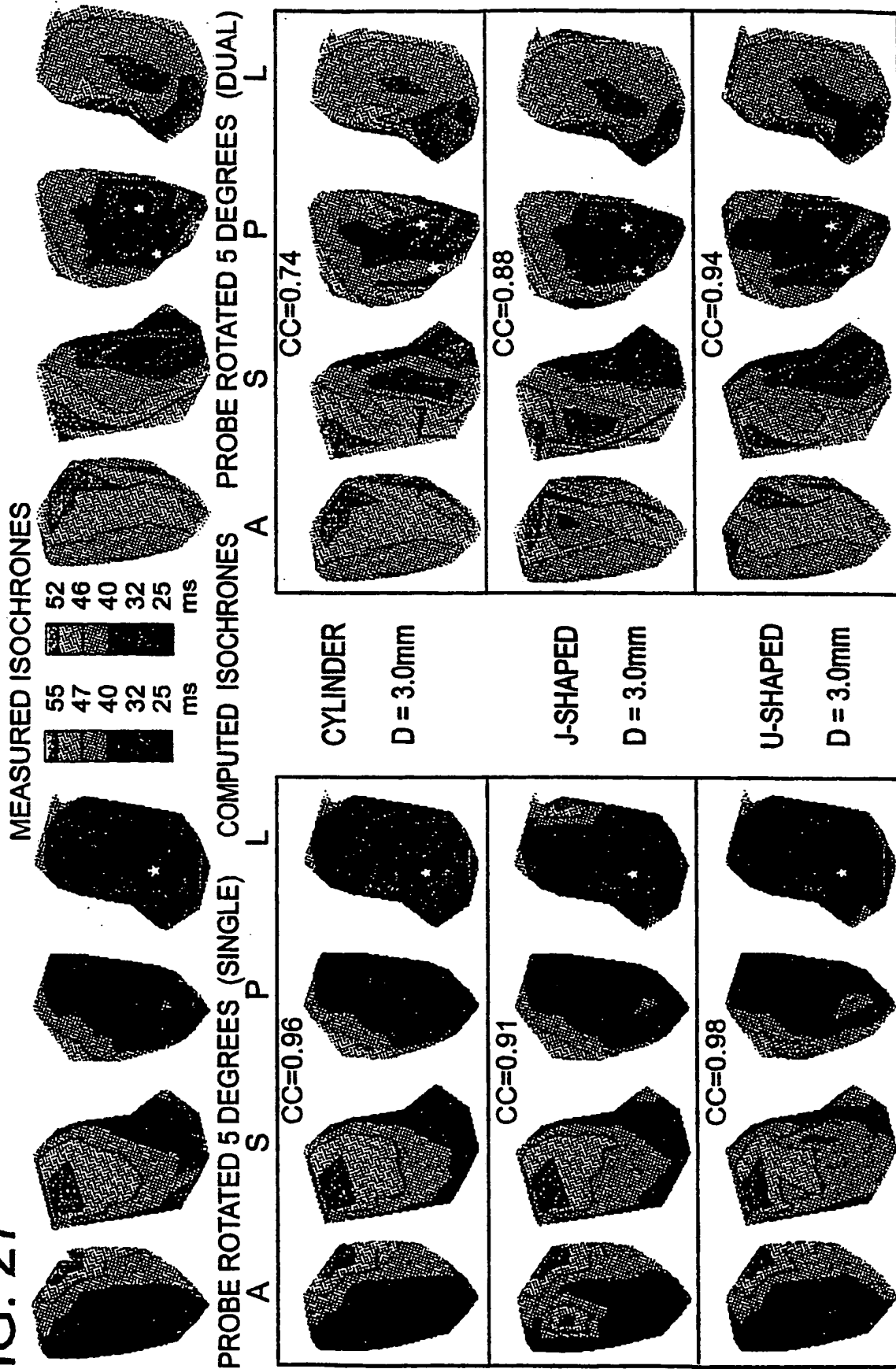


FIG. 28

EFFECTS OF CATHETER SHAPE ON ISOCHRONE MAP

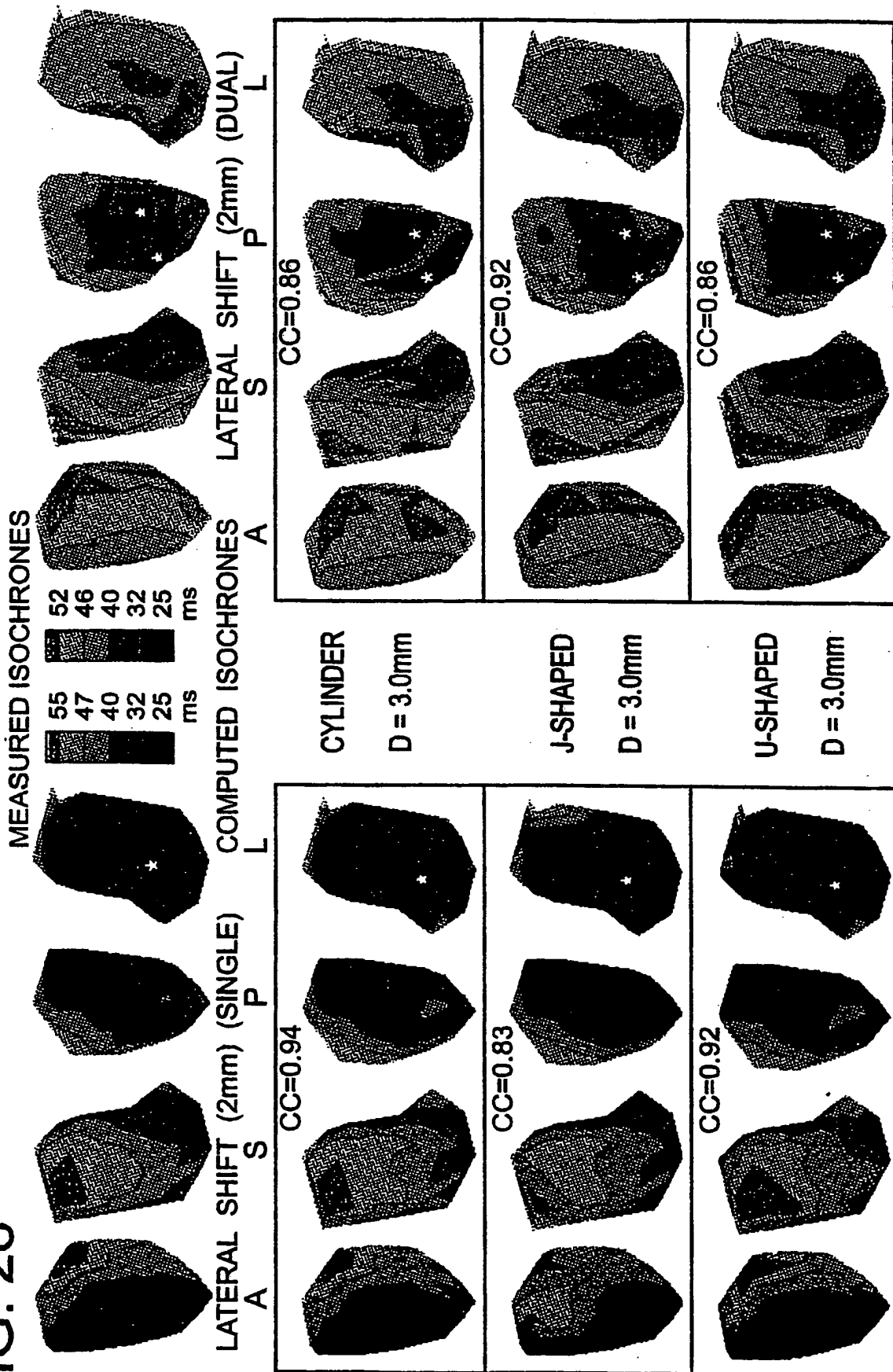


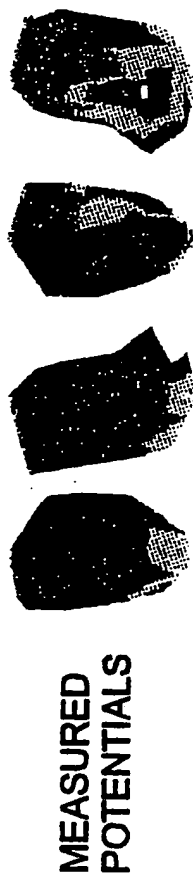
FIG. 29

EFFECTS OF NUMBER OF PROBE ELECTRODES



-12.4 -8.4 -4.4 -0.4

MINIMUM
-16.4mV



MEASURED
POTENTIALS

122 ELECTRODES

62 ELECTRODES

A	S	P	L	A	S	P	L
---	---	---	---	---	---	---	---

CORRELATION COEF.=0.97

CORRELATION COEF.=0.85

CYLINDER

D = 7.60mm



-17.7mV



-17.6mV

CORRELATION COEF.=0.85

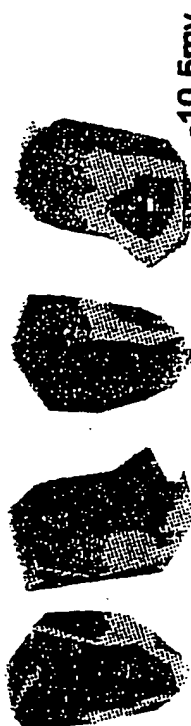
CORRELATION COEF.=0.82

CYLINDER

D = 3.0mm



-9.8mV



-10.5mV

CORRELATION COEF.=0.88

CORRELATION COEF.=0.81

J-SHAPED

D = 3.0mm



-11.2mV



-10.6mV

FIG. 30

EFFECTS OF NUMBER OF ELECTRODES



-20.1 -13.5 -6.9 -0.2

MEASURED
POTENTIALS

-21.4mV

122 ELECTRODES

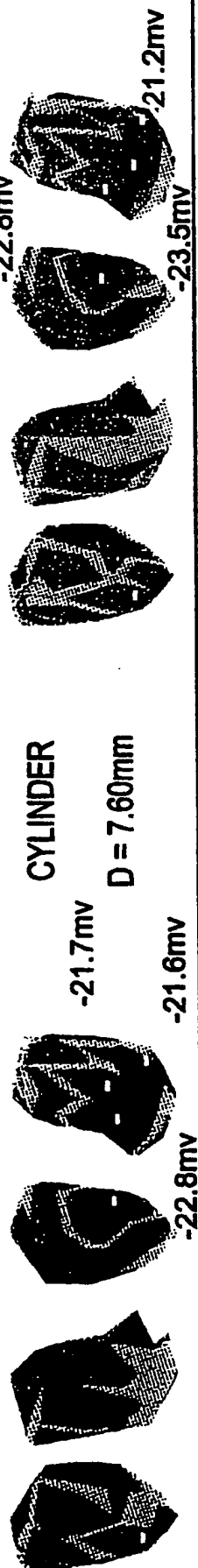
-26.8mV

62 ELECTRODES

A S P L A S P L

CORRELATION COEF.=0.84

CORRELATION COEF.=0.77



CYLINDER

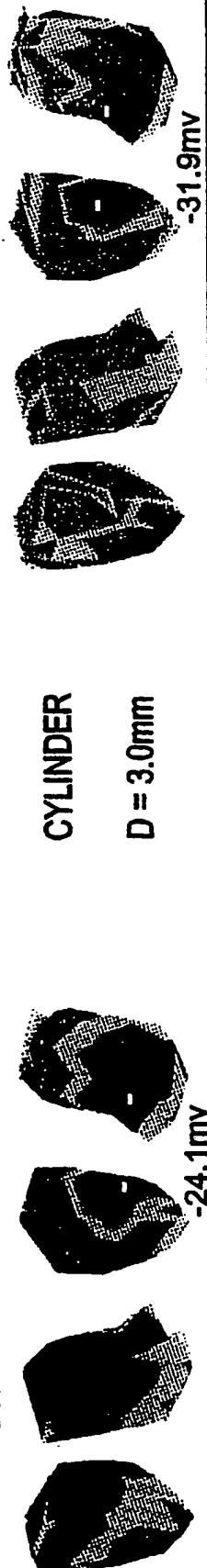
-21.7mV

D = 7.60mm

-21.6mV

CORRELATION COEF.=0.88

CORRELATION COEF.=0.62



CYLINDER

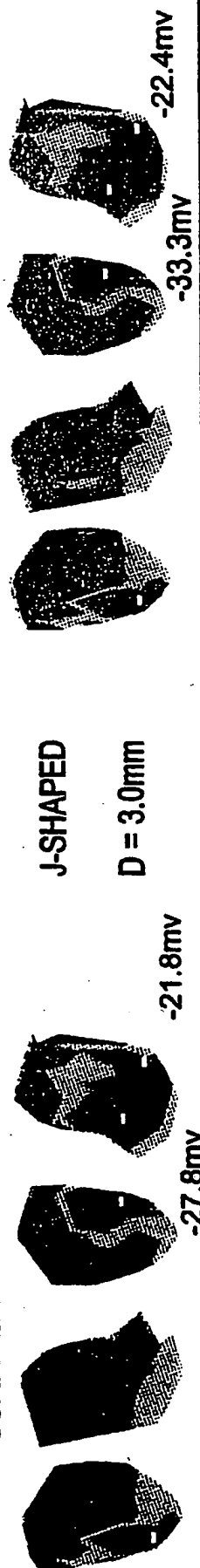
D = 3.0mm

-24.1mV

-31.9mV

CORRELATION COEF.=0.91

CORRELATION COEF.=0.90



J-SHAPED

D = 3.0mm

-21.8mV

-22.4mV

-33.3mV